DATASENSING

easing automation challenges



SAFETY

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Click the series' name!

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OUR EXPERTISE MAKES YOUR WORK EASIER

Datasensing is merging Datalogic's Sensor & Safety and Machine Vision business unit with M.D. Micro Detectors, both with 50 years of experience and representing the history of sensors in Italy since the early '70s.
Our company is developing, manufacturing and supplying Machine Vision, Sensor and Safety, with more than 200 product lines, including 22500 standard and custom part numbers, protected by over 100 patents.
Our products are designed to inspect, detect and protect your production in better and easier way, with diffused applications in industrial automation of manufacturing and intralogistics processes.
Datasensing means high technology and innovative products... but it's the experience of our extraordinary people that makes the difference, from pre-sales to order processing and post-sales.
We have a global presence, with Headquarters in Italy and offices in Europe, China and US, together with a qualified network of distribution partners in all countries.
Datasensing not only focus on products, but also on Environmental, Social and Governance initiatives, as reducing the impact of products, production and logistics.

Our Mission is to create added value through smart sensing solutions based on sustainable standard and custom products, developed with care and leading know how.
Our Vision is to be the top of mind partner to innovate sensing solutions for industrial automation.



WEBSITE



KNOWING HOW FROM 50+ YEARS

1970

DATALOGIC is founded by Romano Volta in Bologna, Italy, and DIELL in nearby Modena on the initiative of Paolo Iori, to meet the new sensor needs of the manufacturing and packaging industries



1975

DATALOGIC expands with new offices in Germany (1974), Japan (1976), US (1978).
DIELL specializes in photoelectric sensors, introducing the first cylindrical M18 (1977) one of the most popular type in the world



1980

DATALOGIC develops the optical barcode reading technology and the first industrial laser scanner application in Europe, becoming in a short time the reference technology leader



1985

DATALOGIC introduces the first barcode reader in an airport, Milan - Linate (1984) and continues its growth at a global level. DIELL changes its name to M.D. Micro Detectors introducing inductive sensors

1990

The new strategy "Il Punto di Volta" leads DATALOGIC to be "an industrial reality with constant and lasting growth, important at an international level" and to enter the portable terminal market



DATALOGIC
EMPOWER YOUR VISION

Datalogic Group is a global leader in the automatic data capture and factory automation markets. It is well known around the world for designing and producing barcode readers, mobile computers,sensors for detection, measurement and safety, RFID, machine vision and laser marking systems. Datalogic solutions help customers increase the quality of their processes in the Retail, Manufacturing, Transportation & Logistics, and Healthcare industries.

The Group has a rich history of over 50 years, during which enormous successes have been achieved: 8 R&D centers and 3 DL Labs in Italy, USA, Vietnam, and China; 11 manufacturing and repair facilities in the USA, Hungary, Slovakia, Italy, China, Vietnam, and Australia; a portfolio of around 1,200 patents and patent applications in multiple jurisdictions; thousands of prestigious partners and customers spread across five continents.

Datalogic Group has offices in 29 countries worldwide, with headquarters in Bologna, Italy. It is through the close cooperation of more than 3,000 employees that Datalogic can boast some of the most remarkable automatic data capture and factory automation solutions available in the market today.

To further strengthen its market position in Industrial Automation, in 2021 Datalogic acquired M.D. Micro Detectors, an Italian company specializing in optical, inductive, capacitive and ultrasonic sensors. This, merged with Datalogic's Sensors & Safety and Machine Vision Business Unit in early 2022, creating a new company and brand Datasensing.

Datasensing's Machine Vision, Sensors and Safety portfolio solves the most challenging applications in Factory Automation, specializing in Processing and Packaging machinery, and Automated Material Handling Systems related to Manufacturing Industries such as Automotive, Electronics, Food & Beverage, Pharmaceutical, Home & Personal Care, Paper and Printing, Metal- and Wood-working, Ceramics, Glass, Textiles etc.

With advanced Inspection, Detection, and Protection devices, the Datasensing Mission is to create added value through smart sensing solutions based on sustainable standard and custom products. They are developed with care and leading know how, with the Vision to be the premier partner for innovative sensing solutions for industrial automation.

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1995



DATALOGIC is a world leader in automatic data acquisition, in 2001 is listed on the New Market of the Milan Stock Exchange and focuses on the sensor market through the new company DATASENSOR

2000



M.D. develops ultrasonic sensors and starts manufacturing in China. DATALOGIC makes new acquisitions (Evolution Robotics, PPT Vision, Accu-Sort) and DATASENSOR becomes the Sensor & Safety business unit

2005



DATALOGIC acquires M.D. Micro Detectors (2021) and Pekat Vision (2022), creating the new Company DATASENSING to strengthen its presence in sensors, safety and machine vision markets

2010

M.D. Micro Detectors starts the Spanish branch, Diell Ibérica SA, also introducing capacitive sensors and area light arrays.
Datalogic starts a new production plant in Castiglion Messer Raimondo, Teramo, Italy

DATASENSOR
value through detection



DATASENSOR wins the "International Best Factory Award" 2005 and introduces many new application sensors, a complete safety light curtains range, and an innovative smart camera sensor

2015



DATALOGIC increases its presence in Manufacturing, T&L, Retail, Healthcare.
Valentina Volta is Datalogic Group's C.E.O. and the founder Romano Volta President.
The first Safety Laser Scanner is launched

2020

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DATALOGIC
EMPOWER YOUR VISION

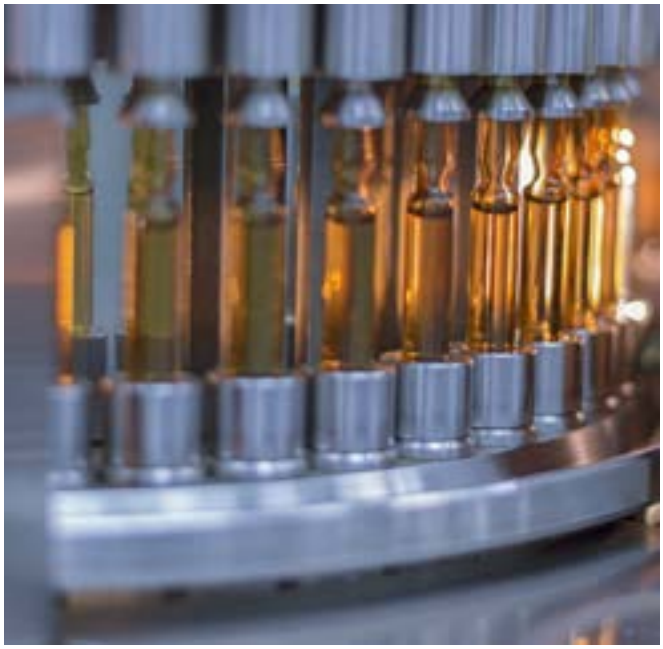


TRACEABILITY



Product traceability is becoming more and more important in every industry, where the identification of items along every manufacturing and intra-logistic process is required, from raw material receiving to finished good shipment whilst passing through work-in-progress management and monitoring. Datalogic provides a wide portfolio of products and solutions to solve all traceability needs.

INSPECTION



Machine vision is an indispensable tool for controlling the quality of processes and products in factory automation and intra-logistics. For this purpose Datasensing offers smart cameras, industrial cameras, vision processors and software tools suitable to read codes or characters (OCR), recognize patterns, detect defects, locate parts, guide robot arms, and control assembly and manufacturing lines.



DETECTION



Photoelectric, inductive, capacitive and ultrasonic sensors are essential in industrial automation to detect the presence of objects or parts, inspect their integrity or correct assembly and measure dimensions, distance, or positioning. Datasensing sensors are available in many different lines, models and functionalities, sensing the smallest or fastest moving objects, even with transparent or shiny surfaces.

PROTECTION



Safety devices are mandatory for operator protection in potentially hazardous areas, plants or machinery. Datasensing safety light curtains are used for the detection of finger, hand, arm, body, or presence detection in fixed applications; whereas safety laser scanners are recommended for area protection in static or dynamic applications, such as robotic cells and automated guided vehicles (AGV).

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SAFETY





Safety devices are mandatory for operator's protection in potentially hazardous areas, plants or machinery. Safety optoelectronic devices are safety light barriers, curtains, grids, light beams and control units, used for the detection of finger, hand, arm, body, or presence detection in fixed applications. Safety laser scanners are suitable for configurable area protection or even dynamic applications, in particular robotic cells and automated guided vehicles (AGV). Safety accessories include cables, connection box, brackets, IP69K protection tubes, lens shield, laser pointer, test pieces.

Manufacturing industry applications include automotive and electronics plants, especially robotic cells; food & beverage, pharmaceutical, chemical goods processing and packaging machines; any machinery used in woodworking, metalworking, textile, ceramic, glass, stones, paper, etc. Logistics applications are diffused in automated material handling, conveyors, storage and retrieval, automated warehouses, and AGV. Furthermore, logistics applications are integrated by Lidars for guidance and navigation, and encoders for the vehicle speed measurement.



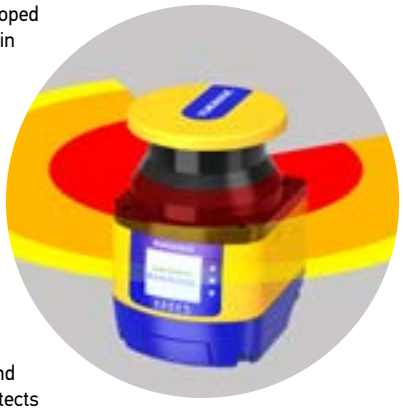




SAFETY LIGHT CURTAINS OR SAFETY LASER SCANNER?

In the safety laser scanners market, Datasensing qualifies as one of the few companies to offer its own developed and manufactured devices.
Datasensing is also one of the world's main safety light curtains manufacturers.
So, who better to answer the question?

SAFETY LASER SCANNER: HOW IT WORKS?



Safety laser scanners are developed for the worker protection in potentially hazardous areas and machinery.
According to EN 61496-1 and EN 61496-3, safety laser scanners are considered Electro-Sensitive Protecting Equipment (ESPE) and Active Optoelectronic Protective Device Responsive to Diffuse Reflection (AOPDDR), defined as "Device with a sensor function produced by optoelectronic send and receive elements which detects the diffuse reflection of optical radiation generated in the device due to the presence of an object in a defined two-dimensional protective field."
Simply put, a safety laser scanner is a device that emits a laser beam that rotates over an angle of typ. 190° up to 275°, detecting the presence and distance of any objects or operators, based on the time of flight of the reflected light. Datasensing enhanced safety laser scanners are inside SLS product line.

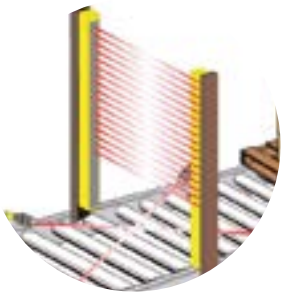
WHERE ARE SAFETY LASER SCANNERS USED?



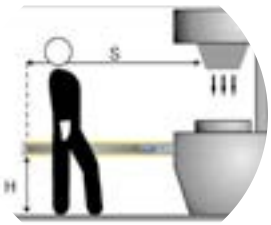
Safety laser scanner applications can be STATIC by detecting the operator's access or presence in an area, for example a robotic cell, or DYNAMIC by mounting the laser scanner on automated guided vehicle (AGV) and detecting obstacles or operators on its way.
Safety laser scanners can also be used in applications with horizontal mounting (optical axis ≤30°), or vertical mounting (optical axis >30°).
With horizontal mounting, the detection usually occurs on a plane close to and parallel to the floor, with typical applications in hazardous areas that can be approached by a person, such as open robotic cells or machinery for processing metal, wood, or other materials.
In vertical mounting, the detection occurs in a plane perpendicular to the floor, effectively creating a barrier in which access protection can be configured, such as in conveyor or palletizing areas.



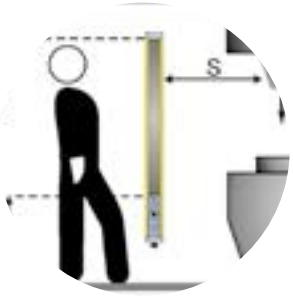
SAFETY LIGHT CURTAIN: HOW IT WORKS?



Safety light curtains are also used for the protection of worker in potentially hazardous areas and machinery.
According to EN 61496-1 and EN 61496-2, safety light curtains are considered Electro-Sensitive Protecting Equipment (ESPE) and Active Opto-electronic Protective Device (AOPD) defined as "Device with a sensor function produced by optoelectronic send and receive elements which detect a break in the optical radiation generated in the device due to the presence of an opaque object in the defined protective field."
Basically, it can be detected when an object, operator, or parts thereof (e.g., finger, hand, or arm) interrupts one or more light beams.
Datasensing latest safety light curtains are inside SH4 product line.



WHERE ARE SAFETY LIGHT CURTAINS USED?



Safety light curtain applications can only be STATIC for hazardous point protection.
For example, close to metalworking machines, or access protection to dangerous areas, such as conveyors, palletizers, and automated warehouses.
Again, safety light curtains can be installed with horizontal or vertical mounting.
With horizontal mounting, the detection usually occurs on a plane parallel to the floor. Typical applications include detection of an operator presence in a protected area before starting a hazardous process or machinery.
In vertical mounting, the detection occurs in a plane perpendicular to the floor, effectively creating a barrier and an access control to dangerous areas or machinery parts.

SAFETY LASER SCANNER OR SAFETY LIGHT CURTAIN, HOW TO CHOOSE?

The selection of a safety sensor for use in machinery is part of the overall risk reduction process.

Such process starts with the analysis and evaluation of all possible risks the machine presents and ends with the validation and testing of the safety system.

The safety sensor chosen should fulfill any safety requirements specific to the machine. If there are no machine-specific requirements, the safety system should be designed to comply with all general safety and health standards, such as: EN ISO 12100: 2010 Safety of machinery – General principles for design – Risk assessment and risk reduction; EN ISO 13849-1: 2008 Safety of machinery - Safety-related parts of control systems. Part 1: General principles for design; EN ISO 13849-2: 2012 Safety of machinery - Safety-related parts of control systems. Part 2: Validation.

The overall system design dictates the parameters the safety sensors must meet.

The following list of parameters and functions related to safety sensors can serve as a checklist to help in the selection process.

1. Performance level (PL) and required performance level (PLr)

Performance level is one of five discrete levels (a, b, c, d, e) that specify the ability of the safety-related part of a control system to perform a specific safety function.

The performance level depends on system design, reliability of components used, diagnostic coverage of dangerous faults and ability of the safety parts to avoid common cause and systematic faults.

The minimum required Performance Level (PLr) to reduce a risk is based on three factors:

i. the severity of injury;

ii. the frequency of exposure to hazard;

iii. the possibility to avoid the hazard.

Safety laser scanners have typically a PL d, whereas safety light curtains can reach PL c in Type 2 and PL e in Type 4.

Datasensing basic safety light curtains are inside SG2 product line for type 4 and SG4 for type 4.

2. Safety integrity level (SIL)

Safety integrity level expresses the degree of reliability reached by a safety device.

The higher the SIL integrity level of a safety system or function, the lower the probability that the safety system or function will fail.

In practice, also considering the Probability of a dangerous Failure per Hour (PFHd), a low performance level PL c corresponds to a SIL 1, a PL d to a SIL 2, and a PL e reaches a higher level SIL 3.

3. Type

Safety laser scanners are Type 3, whereas safety light curtains are classified as Type 2 or Type 4, depending on their design and optical performance.

The maximum PL that can be reached with a Type 2 is PL c, while for a Type 4 the maximum is PL e.

Therefore, to reduce the highest risks on machines, Type 4 should be used.

4. Detection Capability or Resolution

The detection capability is the diameter of the smaller object that will activate the device when it's placed in any point of the detection zone.

The value of the detection capability, together with response time, is crucial to calculating the minimum safety distance required between the light curtain and the dangerous zone.



SAFETY LASER SCANNERS OTHER SELECTION CRITERIA

More technical specifications to consider are:

- Working distance, with different safety and warning values;
- Number of programmable zones and areas;
- Aperture angle over which the detection is made;
- Minimum value of response time;
- Other functions like speed measurement, shut-off, master/slave, programming and monitoring over Ethernet, FieldBus interfaces, etc.

SAFETY LIGHT CURTAINS OTHER SELECTION CRITERIA

Other specifications to consider are:

- Resolution (eg. finger 14 mm, hand 30 mm, or body with 2, 3, or 4 beams);
- Controlled height, which can range from 150 mm up to 3 m or more;
- Operating distance between the emitting and receiving units;
- Housing sizes, material, and mechanical features such as IP protection or no dead zone.

SAFETY ADVANCED FUNCTIONALITIES

Other selection criteria can be the presence of advanced functionalities, e.g., Auto/Manual restart, EDM, Muting, Override, Blanking, Cascading, Anti-interference, etc.

RESTART INTERLOCK

This function prevents automatic restarting of a machine in three cases:

- after actuation of the sensing device during a hazardous part of the machine operating cycle
- after a change in mode of operation of the machine
- after a change in the means of start control of the machine

The start interlock instead prevents an automatic machine start when the electrical supply is switched on, or it is interrupted and restored. Both these functions are achieved by setting the Manual Restart.

EXTERNAL DEVICE MONITORING (EDM)

This function monitors the state of control devices which are external to the safety device.
The safety device shall go to a lock-out condition when an incorrect state is detected in one of the devices being monitored by the EDM.

MUTING AND OVERRIDE

The safety device can be forced in a temporary automatic suspension of a safety function(s), for example to allow the passage of materials, while detecting instead an operator thanks to specific muting sensors.

Muting function has safety requirements:

- it's independent from the operator intervention
- the muting start after a sequence of at least two signals
- according to the risk assessment, a muting indicator can be needed
- it's temporary: when a time limit is reached, it must stop
- the muting sensors must be placed so that they detect actual presence of the load
- specific machine regulations (type C standard) must always be followed

BLANKING

This function allows masking of one or more areas, each of a defined size, either locally fixed (Fixed Blanking) or movable (Floating Blanking) in the detection zone. In this way objects or machine parts can be masked and not considered in the protected area.

CASCADING

This feature allows to connect two or more light curtains to each other, building a system that works as a single device, also allowing the protected height to be increased or different geometries to be constructed, either square or at other angles.

ANTI-INTERFERENCE

This is necessary when two or more devices are mounted close together, or even side by side, to prevent security detection from being disturbed.

WHAT PRODUCTS DOES DATASENSING RECOMMEND?

Datasensing offers SLS Safety Laser Scanners, distinguished by the completeness of range and ease of use, while among Safety Light Curtains the choice ranges from the best-selling SG4 series to the brand new SH4 with improved environmental features and extended functionality, or from the super-compact SLIM series to the world's unique IP69K stainless steel and hygienic design SG4-H for pharmaceutical aseptic environments.



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SAFETY LIGHT CURTAINS

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FIND YOUR SAFETY LIGHT CURTAIN

The selection of safety sensors for use in machinery is part of the overall risk reduction process, which starts with the analysis and evaluation of all possible risks the machine presents and ends with the validation and testing of the safety system. The sensors chosen should fulfill any safety requirements specific to the machine they will be mounted on. If there are no machine-specific requirements, the safety system should be designed to comply with all general safety and health standards. The overall system design dictates the parameters the safety sensors must meet. The following list of parameters and functions related to safety sensors can serve as a checklist to help in the selection process.



SH4 SERIES



INTERACTIVE INDEX:
Just click the series' name!

SH4 is a complete series of safety light curtains and grids, fit for almost all applications needed in machinery automation.
It comprehends finger (14 mm) and hand (30 mm) detection capabilities, with heights that go up to 2250 mm, and multibeam models with 2, 3 and 4 beams with the usual heights of 500, 800, 900 and 1200 mm.
Models for body protection are also available with active/passive operating principle, meaning that only one side needed to be connected with a cable.

For all these models, four different level of functionalities can be chosen depending on the safety functions needed:

- Base, when simple detection and automatic restart are sufficient.
- Standard, for the simplest functions, such as manual restart and external device monitoring (EDM)
- Standard Muting, in which 2-signals muting can be set up with DIP switches when it is needed a passage of material through the curtain.
- Advanced, in which the maximum flexibility is reached, and all functions can be activated and parametrized through programming.

SH4 line comprehends also Cascade units, that can be connected to main units inheriting automatically their functional level in order to build up a system with up to three units, also with different detection capabilities.
All models belonging to SH4 series, independently from functionality level or detection capability, use the same housing profile: this means that they share characteristics, dimensions and accessories and customers can easily pass from one model to another one following their necessities.

Type	Resolution (mm)	Range (m)	Height (mm)	Special Features	Functions	Additional HW features	Version
4	14	0.2 ... 10	300 ... 1800	-	Auto restart	Zero dead zone	**SH4 BASE**
	30	0.2 ... 20					
	2/3/4 beams	0.5 ... 70	500/800/900/1200				
	14	0.2 ... 10	300 ... 1800		Manual / Auto Restart, External Device Monitoring (EDM)	Zero dead zone Configurable by wiring	**SH4 STANDARD**
	30	0.2 ... 20					
	2/3/4 beams	0.5 ... 70	500/800/900/1200				
	14	0.2 ... 10	300 ... 1800		Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override	Zero dead zone Integrated muting signalling Configurable by DIP-switches Cascadable***	**SH4 STANDARD MUTING**
	30	0.2 ... 20					
	2/3/4 beams	0.5 ... 70	500/800/900/1200				
	14	0.2 ... 10	300 ... 1800	Wi-fi connection**	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override, Fixed/Floating Blanking	Zero dead zone Integrated muting signalling Configurable by App Cascadable***	**SH4 ADVANCED**
	30	0.2 ... 20					
	2/3/4 beams	0.5 ... 70	500/800/900/1200				
		0.2 ... 8		Active / Passive operating principe	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override ***	Integrated muting signalling	**SH4 ACTIVE / PASSIVE***
	14	0.2 ... 10	300 ... 1800	Cascaded units	Functions inherited by main unit		**SH4 CASCADE**
	30	0.2 ... 20					

* SH4 ACTIVE PASSIVE can be base/standard/standard muting/advanced
** For temporary monitoring and configuration
*** Depending on models

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SAFETY LIGHT CURTAINS

Datasensing portfolio includes several series of light curtains with finger and hand detection capabilities, differentiated by dimensions, material, features, functionality level and communication characteristics.
SG2 and SG4 series have slightly different versions depending on safety level and functions, SG4 EXTENDED being the most flexible, with zero dead zone and optional programming.
SLIM characteristics are the extremely thin profile and the many heights, for applications where the mechanical fitting into the machine is the main driver.
SG4-H is a IP69K and hygienic designed stainless steel light curtains for the Pharmaceutical Industry.
SG4 FIELDBUS is the only safety light curtain on the market with integrated openSAFETY over POWERLINK communication.

Type	Resolution (mm)	Range (m)	Height (mm)	Special Features	Functions	Additional HW features	Version
4	14	0.2 ... 6	150 ... 1800	-	Manual / Auto Restart / External Device Monitoring (EDM)	-	**SG4 BASE**
	30	0.2 ... 19					
	14	0.2 ... 7	300 ... 1800	Programmable through Ethernet	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override, Fixed/Floating Blanking	Zero dead zone Cascadable Monitoring via Ethernet/IP Error logging	**SG4 EXTENDED**
	30	0.2 ... 20					
	14	0.2 ... 7		Configurable with pushbuttons Retrocompatible with SE serie	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override	Zero dead zone Single M12 8-pin connector for receiver	**SG4-N**
	30	0.2 ... 20					
	14	0.2 ... 6	150 ... 450	For Pharmaceutical applications	Auto restart	Stainless steel housing Glass window	**SG4-H (PHARMA)**
	30	0.2 ... 19	150 ... 1800	With integrated openSAFETY over POWERLINK	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override, Fixed/Floating Blanking	-	**SG4 FIELDBUS ******
	40	6 ... 60	660/960/1260	-	Manual / Auto Restart / External Device Monitoring (EDM)	Sturdy Profile	**SG4 LONG RANGE BASE**
2/4	14 / 24 / 34	0.2 ... 6	150 ... 1200	Ultra-thin profile	Manual / Auto Restart / External Device Monitoring (EDM)	Zero dead zone Cascadable	**SLIM**
2	30/50/90	0.2 ... 19	150 ... 1800	-	Auto restart	-	**SG2 BASE**
					Manual / Auto Restart / External Device Monitoring (EDM)		**SG2 EXTENDED**
	30	0.2 ... 20	300 ... 1800		Manual / Auto Restart, External Device Monitoring (EDM) / T/L Muting, Partial Muting, Override	Zero dead zone	**SG2 MUTING**

**** The safety functions have to be implemented in the safety PLC that read the status of the light curtain through openSAFETY

SAFETY LIGHT GRIDS

For body protection, SG BODY COMPACT and SG BODY BIG, both in type 2 and 4 can be choosen based on desired dimension, maximum range and functionality level, wher mainly the muting function can be a differentiator.
The Active/Passive operating mode is the characteristic of SG REFLECTOR.
Same body protection and muting functions, as well as more free installations, can be reached using single sensors both cylindrical and rectangular, like S5, SL5, S300 and SH/TH in combination with their safety control unit.

Type	Resolution (mm)	Range (m)	Height (mm)	Special Features	Functions	Additional HW features	Version
2/4	2/3/4 beams	0.5 ... 50	500/800/900/1200	-	Manual / Auto Restart / External Device Monitoring (EDM)	-	**SG BODY COMPACT BASE**
		0.5 ... 50 0.5 ... 3* 0.5 ... 7**			Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override	Integrated muting lamp Integrated muting arms***	**SG BODY COMPACT MUTING**
		0.5 ... 60			Manual / Auto Restart / External Device Monitoring (EDM)	Sturdy profile	**SG BODY BIG BASE**
		0.5 ... 60 0.5 ... 3* 0.5 ... 7**			Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Override	Sturdy profile Integrated muting lamp	**SG BODY BIG MUTING**
		0.5 ... 8		Active/Passive operating principe	Manual / Auto Restart / External Device Monitoring (EDM)	Sturdy profile	**SG BODY REFLECTOR BASE**
		0.5 ... 8 0.5 ... 3*			Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Override	Sturdy profile Integrated muting lamp Integrated muting arms***	**SG BODY REFLECTOR MUTING**
		0 ... 8*** 0 ... 40***	free installation	Single sensors with SG-BWS external control unit	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Override	M18 Tubular Laser beam (SL5)	**S5/SL5**
		0 ... 40*** 0 ... 50***		Single sensors with SG-BWS external control unit Defogging function***	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Override	Rectangular	**S300**
		0 ... 10*** 0 ... 60***		Single sensors with SBCR03 external control unit	Manual / Auto Restart, External Device Monitoring (EDM), Muting, Double Muting, Override	M18 Tubular M30 Tubular	**SH_IA** **TH_IA**
				Single sensors with external control unit	Depend on external control unit used		**SH_IC** **TH_IC**
4		0.2 ... 19	150 ... 1800	With integrated openSAFETY over POWERLINK	Manual / Auto Restart, External Device Monitoring (EDM), T/L Muting, Partial Muting, Override	-	**SG4 FIELDBUS** ****

* With retroreflective muting arms
** With emitter / receiver muting arms
*** Depending on models
**** The safety functions have to be implemented in the safety PLC that read the status of the light curtain through openSAFETY

SH4 Base

TYPE 4 SAFETY LIGHT CURTAIN WITH BASIC FUNCTIONALITY



NEW!

Base version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels.

- Finger protection (14 mm)Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: up to 70 m
- Basic functions: alignment, automatic restart
- Monitored height (finger/hand): from 300 to 2250 mm
- Monitored height (body): 500, 800, 900 and 1200 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Complete pair of emitter and receiver and angular brackets included in the package
- Pigtails with M12 connectors with standard not shielded cables

• Automatic machinery
• Material handling
• Processing & packaging machines
• Automotive, metalworking, presses
• Palletizers
• Automatic assembly machines and lines

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SH4 Standard

TYPE 4 SAFETY LIGHT CURTAIN WITH STANDARD FUNCTIONALITY



NEW!

Standard version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels. Standard models provide EDM and auto/manual restart.

- Finger protection (14 mm)
- Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: up to 70 m
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Monitored height (finger/hand): from 300 to 2250 mm
- Monitored height (body): 500, 800, 900 and 1200 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Complete pair of emitter and receiver and angular brackets included in the package
- Pigtails with M12 connectors with standard not shielded cables

• Automatic machinery
• Material handling
• Processing & packaging machines
• Automotive, metalworking, presses
• Palletizers
• Automatic assembly machines and lines

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SH4 Standard Muting

TYPE 4 SAFETY LIGHT CURTAIN WITH MUTING FUNCTIONALITY



NEW!

Standard Muting version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels. These models provide 2-signals mono and bidirectional muting.

- Finger protection (14 mm)
- Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: up to 70 m
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Standard Muting functions: 2-signals mono and bidirectional muting, override
- Configuration of functions with DIP-SW
- Monitored height (finger/hand): from 300 to 2250 mm
- Monitored height (body): 500, 800, 900 and 1200 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Complete pair of emitter and receiver and angular brackets included in the package
- Anti-interference codes
- Muting accessories available with prewired and preinstalled muting sensors
- Cascadable with SH4 CASCADE up to three units
- Pigtails with M12 connectors with standard not shielded cables
- Integrated LED muting indication

• Automatic machinery
• Material handling
• Processing & packaging machines
• Automotive, metalworking, presses
• Palletizers
• Automatic assembly machines and lines

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INTERACTIVE INDEX

SH4 Advanced

PROGRAMMABLE SAFETY LIGHT CURTAIN WITH INTEGRATED AIMERS



Advanced version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels. The advanced version is characterized by full wi-fi programmability and by integrated alignment aimers.

- Finger protection (14 mm)
- Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: 10-70 m
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Standard Muting functions: 2-signals mono and bidirectional muting, override
- Advanced functions: partial muting, dynamic partial muting, 4-signals muting
- Innovative wireless monitoring and configuration system
- Monitored height (finger/hand): from 300 to 2250 mm
- Monitored height (body): 500, 800, 900 and 1200 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Simultaneous muting and blanking
- Complete pair of emitter and receiver and angular brackets included in the package
- Anti-interference codes
- Alignment eased with red LED
- Integrated LED muting indication
- Muting accessories available with prewired and preinstalled muting sensors
- Pigtails with M12 connectors with standard not shielded cables

- Automatic machinery
- Material handling
- Processing & packaging machines
- Automotive, metalworking, presses
- Palletizers
- Automatic assembly machines and lines

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SH4 Active/Passive

TYPE 4 SAFETY LIGHT CURTAIN WITH ACTIVE/ PASSIVE OPERATING PRINCIPLE



The active/passive version of SH4 safety light curtain, with base, standard and advanced functionality

- Type 4 safety light curtains with active/passive operating principle
- Body protection with 500, 800, 900, 1200 mm controlled height
- Up to 8 m operating range (depending on model)
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Standard Muting functions: 2-signals mono and bidirectional muting, override
- Advanced functions: partial muting, 4-signals muting
- Innovative wireless monitoring and configuration system (depending on models)
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Complete pair of active and passive sides and angular brackets included in the package
- Anti-interference codes (depending on models)
- Integrated LED muting indication
- Muting accessories available with prewired and preinstalled muting sensors
- Pigtails with M12 connectors with standard not shielded cables

- Automatic machinery
- Material handling
- Processing & packaging machines
- Palletizers

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SH4 Cascade

SAFETY LIGHT CURTAIN MODELS FOR CONNECTION WITH SH4 SERIES



Cascade version of SH4. They can be connected to SH4 Advanced and Standard Muting models reaching up to three units, inheriting the functional level of the main one.

- Cascade model, to be used with SH4 STANDARD MUTING or SH4 ADVANCED
- Finger protection (14 mm)
- Hand protection (30 mm)
- Improved operating range: up to 20 m
- Monitored height (finger/hand): from 300 to 2250 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Complete pair of emitter and receiver and angular brackets included in the package
- Anti-interference codes
- Cascade cables up to 10 m
- Compatible with Standard Muting or Advanced model, inherits their functionality

- Automatic machinery
- Material handling
- Processing & packaging machines
- Automotive, metalworking, presses
- Palletizers
- Automatic assembly machines and lines

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SLIM

ULTRACOMPACT SAFETY LIGHT CURTAIN FINGER/HAND RESOLUTION



Ultra-compact safety light curtain with standard functionality, for applications where space saving and mechanical flexibility is a must.

- Highest mechanical flexibility for a perfect fit into machine structures
- Simple commissioning and maintenanceHigh functional performance
- SLIM profile: 15 x 32 mm
- Pigtail cable with 5-pole M12 connectors
- Same cable for Emitter and Receiver
- No Dead Zone14, 24 and 34 mm resolution
- 34 different protection lengths, with 30 mm modularity
- 3 different brackets shapes
- Cascadable up to 3 units
- Auto/Manual restart and EDM function configuration by wiring
- LED display messages diagnosis

• Automatic assembly machines & lines
• Primary packaging machinery
• Cutting machinery
• Automatic and semi-automatic quality inspection
• Material handling machinery

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SG4 Base

TYPE 4 SAFETY LIGHT CURTAIN WITH BASIC FUNCTIONALITY



Type 4 finger and hand resolution light curtain for access and presence detection in dangerous machinery that require basic functions like manual restart and external device monitoring.

- High reliability
- Easy installation and alignment
- Cost effective finger, hand detection with basic functions
- Up to 19 m operating distance
- Compact dimensions (32.3 x 36.9 mm section)
- Anti-interfence coding
- IP65 Protection; IP69K with optional tube
- Unshielded cables
- Rotating and anti-vibration brackets

• Automatic machinery
• Metalworking, Woodworking
• Manufacturing (textile, ceramics, etc)
• Material handling, assembly lines

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SG4-N

TYPE 4 SAFETY LIGHT CURTAIN WITH INTEGRATED MUTING FUNCTION



Safety light curtain with finger or hand resolution, integrated muting, retro compatible with SE series.

- No dead zone
- Pigtail cable with M12 connector
- Up to 20 m operating range and 1800 mm protected height
- Compact dimensions (35 x 41 mm section)
- Anti-interference coding
- Integrated Muting function
- Configurable with Push buttons for common configuration

• Automatic machines Robots
• Automatic assembling lines
• Palletizers and Depalletizers

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SG4 Extended

TYPE 4 SAFETY LIGHT CURTAIN WITH ADVANCED FUNCTIONALITY



Type 4 Finger and hand resolution safety light curtain with possibility of configuration of advanced functions through pushbuttons or Graphic User Interface.

- No dead zone
- Pigtail cable with M12 connector
- Cascade connection of up to 3 units
- Up to 20 m operating range and 1800 m protected height
- Compact dimensions (35 x 41 mm section)
- Anti-interference coding
- Integrated Muting function
- Floating Blanking, Fixed Blanking and Reduced Resolution
- Configurable with: Pushbuttons for common configuration
- Graphic User Interface for complete parametrization
- Ethernet Interface for programming, monitoring and error logging

- Processing and packaging machines
- Automotive, metalworking, presses
- Manufacturing assembly lines

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SG4-H

IP69K STAINLESS STEEL SAFETY LIGHT CURTAIN FOR PHARMA



Finger protection in applications where high hygienic requirements need frequent cleanings with higly corrosive detergents.
The first safety light curtain with stainless steel housing and glass.

- Stainless steel housing
- Hygienic design
- No need for additional protection tubesl
- P69K full protection
- Housing: AISI316L stainless steel with roughness under 0.8 micron
- Window: Optical glass
- Rounded surfaces with no gaps or sharp edges
- No labels: All information laser marked
- Maximum safety: Type 4, finger resolution
- Three protection heights: 150, 300 and 450 mm
- 50 x 30 mm profile
- 4 LEDs and 7-segment display alignment aiding

- Primary packaging and filling machinery
- Liquid aseptic processing: syringe filling
- Solid dose processing: tablet blistering
- RABS (Restricted Access Barrier Systems)

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SG4 Fieldbus

SAFETY LIGHT CURTAIN WITH POWERLINK FIELDBUS



Safety light curtain with integrated openSAFETY over POWERLINK protocol. Complete diagnostic and monitoring available over the communication bus. Doesn't require programming: safety functions are managed in safety PLC using information sent by the light curtain.

- Fast and easy installation, configuration and maintenance
- Complete diagnostic and monitoring available over the communication bus
- Basic models: classic functions available
- Advanced models: each beam status safe information available
- Two M12 connectors on receiver side for POWERLINK connection
- M8 connectors on emitter and receiver for power supply
- Up to 19 m operating range and 1800 m protected height
- Finger, hand and body protection
- Compact dimensions (35 x 42 mm section)
- POWERLINK node address configurable with selector switches
- Functions available in combination with B&R safety controller SL and SLX: auto/manual restart, EDM, Muting, Override
- Functions available for advanced models in combination with B&R safety controller SL: fixed blanking, floating blanking, partial and dynamic muting, warning areas, measurement

- Automatic and semi-automatic machines and lines
- Primary packaging machinery (packing, filling, labelling, etc...)
- Cutting machinery
- Bending and metal-working machines
- Material handling machinery
- Palletizers and depalletizers
- Material handling
- Robots cells

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SG2 Base

TYPE 2 SAFETY LIGHT CURTAIN WITH BASIC FUNCTIONALITY



Safety light curtain for hand, arm and presence detection with basic functions.
High reliability, easy installation and alignment, cost effective solution for simple protection needs.

- High reliability
- Easy installation and alignment
- Cost effective
- Finger, hand, arm detection with basic functions
- 90 mm version for presence detection
- Up to 19 m operating distance
- Compact dimensions (32.3 x 36.9 mm section)
- Anti-interfence coding
- IP65 Protection
- Unshielded cables
- Rotating and anti-vibration brackets

- Automatic machinery
- Metalworking, Woodworking
- Manufacturing (textile, ceramics, etc)
- Material handling, assembly lines

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SG2 Extended

TYPE 2 SAFETY LIGHT CURTAIN WITH STANDARD FUNCTIONALITY



Finger and hand presence safety detection with manual restart and EDM functionalities.

- High reliability
- Easy installation and alignment
- Cost effective Finger, hand, arm detection with standard functions
- 90 mm version for presence detection
- Up to 19 m operating distance
- Compact dimensions (32.3 x 36.9 mm section)
- Anti-interfence coding
- IP65 Protection; IP69K with optional tube
- Unshielded cables
- Rotating and anti-vibration brackets

- Automatic machinery
- Metalworking, Woodworking
- Manufacturing (textile, ceramics, etc)
- Material handling, assembly lines

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SG2 Muting

TYPE 2 SAFETY LIGHT CURTAIN FOR HAND DETECTION WITH MUTING



Type 2 finger and hand presence safety detection with zero dead zone and integrated muting, configurable with pushbuttons.

- No dead zone
- Pigtail cable with M12 connector
- Up to 20 m operating range and 1800 m protected height
- Compact dimensions (35 x 41 mm section)
- Anti-interference coding
- Integrated Muting function
- Configurable with Push buttons

- Automatic machinery
- Metalworking, Woodworking
- Manufacturing (textile, ceramics, etc)
- Material handling, assembly lines

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SG Body Compact Base / Muting

COMPACT TYPE 2 AND TYPE 4 SAFETY LIGHT GRID FOR BODY DETECTION



Safety light curtain with compact housing and long operating range, ideal for access or perimeter control.
Integrated muting and override functions.

- Body access detection
- Perimeter control
- Rapid solution for access control with muting
- Easy installation and alignment
- L and T muting models provided with Retroreflective Muting Arms
- Two, three or four beams for body protection
- Controlled heights of 500, 800, 900 and 1200 mm
- Long operating distance: up to 50 m
- Simple configuration through DIP switches
- Integrated muting lamp (only on muting models)

- Automatic machines
- Robots
- Automatic assembly lines
- Palletizers and depalletizers
- Material handling

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SG Body Big Base / Muting

ROBUST TYPE 2 AND TYPE 4 SAFETY LIGHT GRID FOR BODY AND ARM DETECTION



Safety light curtain with robuts housing and long operating range, ideal for harsh environments and perimeter control.
Access control is eased by integrated muting and override functions.
Integrated muting lamp.

- Robust housing for harsh environments
- Long operating range for perimeter control
- Rapid solution for access control with muting
- Easy installation and alignment
- 2, 3, 4 beams for body protection
- 40 mm resolution for arm protection and presence detection
- Controlled heights 500, 800, 900 and 1200 mm
- Long operating distance: up to 60 m
- Simple configuration through DIP switches
- Integrated muting lamp (only muting models)
- Anti-interference coding
- External muting enable signal
- Edged or triggered muting dependent override

- Automatic machines
- Robots
- Automatic assembly lines
- Palletizers and depalletizers
- Material handling

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SG Body Reflector Base / Muting

RETROREFLECTIVE TYPE 4 SAFETY LIGHT GRID FOR BODY DETECTION



Sturdy safety light curtain for body protection with only one active side.
Access control is eased by integrated muting and override functions.
Integrated muting lamp.

- One active and one passive unit to reduce wiring and installation costs
- Robust housing for harsh environments
- Easy installation and alignment
- Reflective muting arms included in L and T muting version
- All advanced features associated to muting function
- 2, 3, 4 beams for body protection
- Controlled heights 500, 800, 900 and 1200 mm
- Up to 8 m operating distance
- Simple configuration through DIP switches
- Integrated muting lamp (muting models)
- Anti-interference coding
- External muting enable signal
- Edged or triggered muting dependent override

- Automatic machines
- Robots
- Automatic assembly lines
- Palletizers and depalletizers
- Material handling

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DATASENSING
easing automation challenges



DATASENSING
easing automation challenges

NEW!

WEBSITE

SH4 Base

TYPE 4 SAFETY LIGHT CURTAIN WITH BASIC FUNCTIONALITY



Base version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels.

- Finger protection (14 mm)Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: up to 70 m
- Basic functions: alignment, automatic restart
- Monitored height (finger/hand): from 300 to 2250 mm
- Monitored height (body): 500, 800, 900 and 1200 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Complete pair of emitter and receiver and angular brackets included in the package
- Pigtails with M12 connectors with standard not shielded cables

SAFETY TYPE 4

CODE DESCRIPTION

SH 4 - 14 - 0300 - B - 5

series	**SH**	Safety light curtain
type	**4**	Type 4
detection capability	**14**	Finger: 14 mm
	30	Hand: 30 mm
	2	Body: 2 beams
	3	Body: 3 beams
	4	Body: 4 beams
monitored height	**0300**	300 mm
	0450	450 mm
	...	
	2250	2250 mm
	0500	500 mm (2 beams)
	0800	800 mm (3 beams)
	0900	900 mm (4 beams)
	1200	1200 mm (4 beams)
functionality	**B**	Basic
receiver main connector	**5**	5 - pin male M12

TECHNICAL SPECIFICATIONS

	SH4-14-****-B-5	SH4-30-****-B-5
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.5 ... 10 m	0.5 ... 20 m
Controlled height	300 ... 2250 mm	
EMISSION DATA		
Emission	Infrared LED (850nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Automatic Restart	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3.5 W	
Power consumption - Receiver	≤ 4 W without load	
Maximum DC load current	250 mA each output	
Capacitive load tolerated	≤ 1 µF	
MECHANICAL DATA		
Dimensions	35 x 40 x (300 ... 2250) mm	
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT	
Connections	M12-5 poles pigtail (emitter) M12-5 poles pigtail (receiver)	
Length of cables (Power)	≤ 30 m	
CERTIFICATIONS		
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)	
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)	
Electromagnetic compatibility	According to 2014/30/EU Directive	
ENVIRONMENTAL DATA		
Operating Temperature	-30 ... 55 °C	
Storage temperature max.	-30 ... 70 °C	
Mechanical Protection	IP65, IP67	
Humidity	95 %	
Ambient light immunity	According to IEC 61496-2	

TECHNICAL SPECIFICATIONS

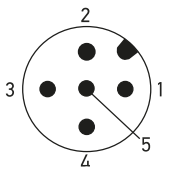
	SH4-2-0500-B-5	SH4-3-0800-B-5	SH4-4-****-B-5
		SAFETY TYPE 4	
GENERAL DATA			
Operating principle	Emitter + Receiver		
Detection capability	500 mm	400 mm	300, 400 mm
MONITORED AREA			
Nominal sensing distance	70 m		
Controlled height	500 mm	800 mm	900 ... 1200 mm
EMISSION DATA			
Emission	Infrared LED (850nm)		
Effective beam angle	≤ ±2.5 °		
FUNCTIONS			
Available functions	Automatic Restart		
SAFETY PARAMETERS			
Type	4		
Pl	e		
SIL	SIL 3 (IEC 61508)		
INPUT/OUTPUT			
Output type	2 x PNP		
ELECTRICAL DATA			
Supply voltage	24 Vdc ±20%		
Power consumption - Emitter	≤ 3.5 W		
Power consumption - Receiver	≤ 4 W without load		
Maximum DC load current	250 mA each output		
Capacitive load tolerated	≤ 1 µF		
MECHANICAL DATA			
Dimensions	35 x 40 x (500) mm	35 x 40 x (800) mm	35 x 40 x (900 ... 1200) mm
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT		
Connections	M12-5 poles pigtail (emitter) M12-5 poles pigtail (receiver)		
Length of cables (Power)	≤ 50 m		
CERTIFICATIONS			
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)		
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)		
Electromagnetic compatibility	According to 2014/30/EU Directive		
ENVIRONMENTAL DATA			
Operating Temperature	-30 ... 55 °C		
Storage temperature max.	-30 ... 70 °C		
Mechanical Protection	IP65, IP67		
Humidity	95 %		
Ambient light immunity	According to IEC 61496-2		

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger protection res. 14 mm	0.5 ... 10 m	300 mm	30	9 ms	**SH4-14-0300-B-5** (957920001)
			450 mm	45	10 ms	**SH4-14-0450-B-5** (957920002)
			600 mm	60	12 ms	**SH4-14-0600-B-5** (957920003)
			750 mm	75	13 ms	**SH4-14-0750-B-5** (957920004)
			900 mm	90	15 ms	**SH4-14-0900-B-5** (957920005)
			1050 mm	105	16 ms	**SH4-14-1050-B-5** (957920006)
			1200 mm	120	18 ms	**SH4-14-1200-B-5** (957920007)
			1350 mm	135	20 ms	**SH4-14-1350-B-5** (957920008)
			1500 mm	150	21 ms	**SH4-14-1500-B-5** (957920009)
			1650 mm	165	23 ms	**SH4-14-1650-B-5** (957920010)
			1800 mm	180	24 ms	**SH4-14-1800-B-5** (957920011)
			1950 mm	195	26 ms	**SH4-14-1950-B-5** (957920012)
			2100 mm	210	27 ms	**SH4-14-2100-B-5** (957920013)
			2250 mm	225	29 ms	**SH4-14-2250-B-5** (957920014)
	Hand protection res. 30 mm	0.5 ... 20 m	300 mm	30	7 ms	**SH4-30-0300-B-5** (957920057)
			450 mm	45	8 ms	**SH4-30-0450-B-5** (957920058)
			600 mm	60	9 ms	**SH4-30-0600-B-5** (957920059)
			750 mm	75		**SH4-30-0750-B-5** (957920060)
			900 mm	90	10 ms	**SH4-30-0900-B-5** (957920061)
			1050 mm	105	11 ms	**SH4-30-1050-B-5** (957920062)
			1200 mm	120	12 ms	**SH4-30-1200-B-5** (957920063)
			1350 mm	135		**SH4-30-1350-B-5** (957920064)
			1500 mm	150	13 ms	**SH4-30-1500-B-5** (957920065)
			1650 mm	165	14 ms	**SH4-30-1650-B-5** (957920066)
			1800 mm	180		**SH4-30-1800-B-5** (957920067)
			1950 mm	195	15 ms	**SH4-30-1950-B-5** (957920068)
			2100 mm	210	16 ms	**SH4-30-2100-B-5** (957920069)
			2250 mm	225	17 ms	**SH4-30-2250-B-5** (957920070)
	Body protection 2 beams	70 m 0.5 ... 15 (default); 5 ... 70 (selectable long range)	500 mm	2	12 ms	**SH4-2-0500-B-5** (957920127)
	Body protection 3 beams		800 mm	3	15 ms	**SH4-3-0800-B-5** (957920128)
	Body protection 4 beams		900 mm	4		**SH4-4-0900-B-5** (957920129)
			1200 mm			**SH4-4-1200-B-5** (957920130)

CONNECTIONS

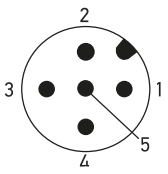
SH4-14-**-B-5 (Emitter)**



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED
5	Gray	NOT USED

SH4-14-**-B-5 (Receiver)**

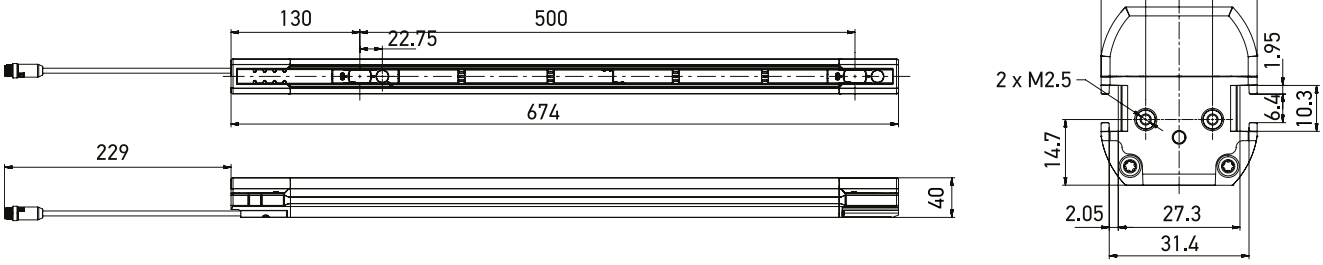


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	OSSD1
3	Blue	0 V
4	Black	OSSD2
5	Gray	COM

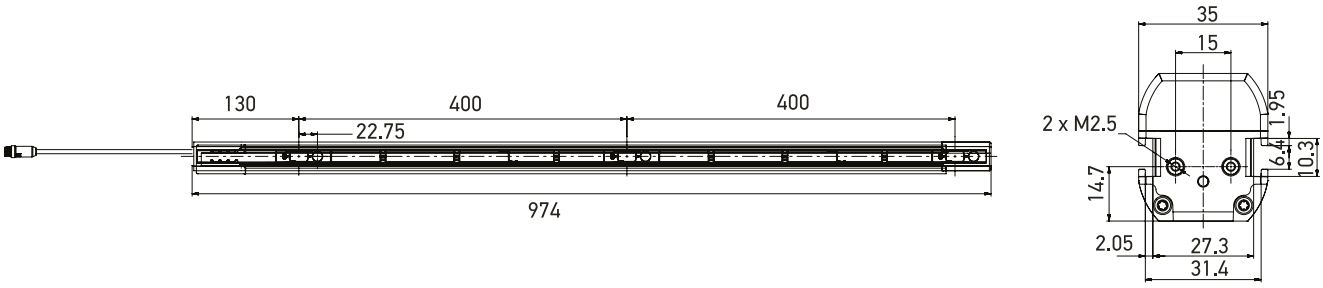
MECHANICAL DRAWINGS

SH4-2-0500-B-5 SH4 Basic



(mm)

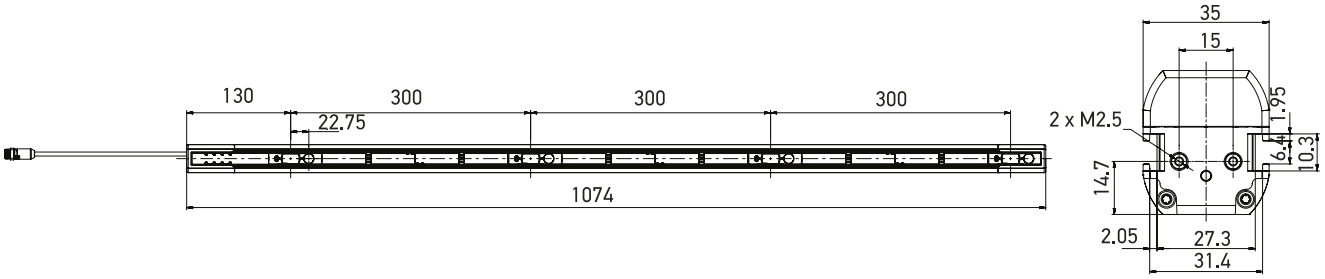
SH4-3-0800-B-5 SH4 Basic



(mm)

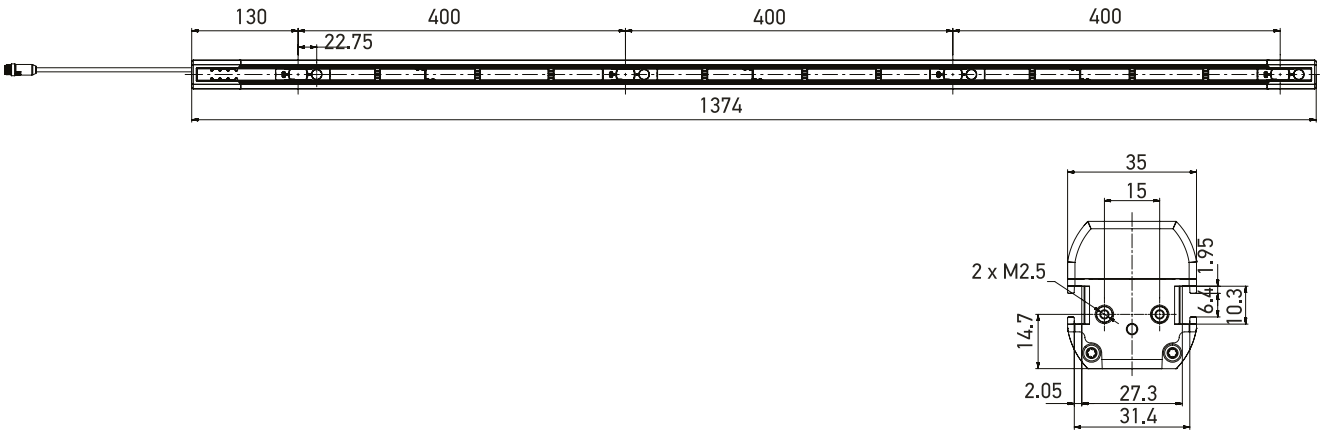
MECHANICAL DRAWINGS

SH4-4-0900-B-5 SH4 Basic



(mm)

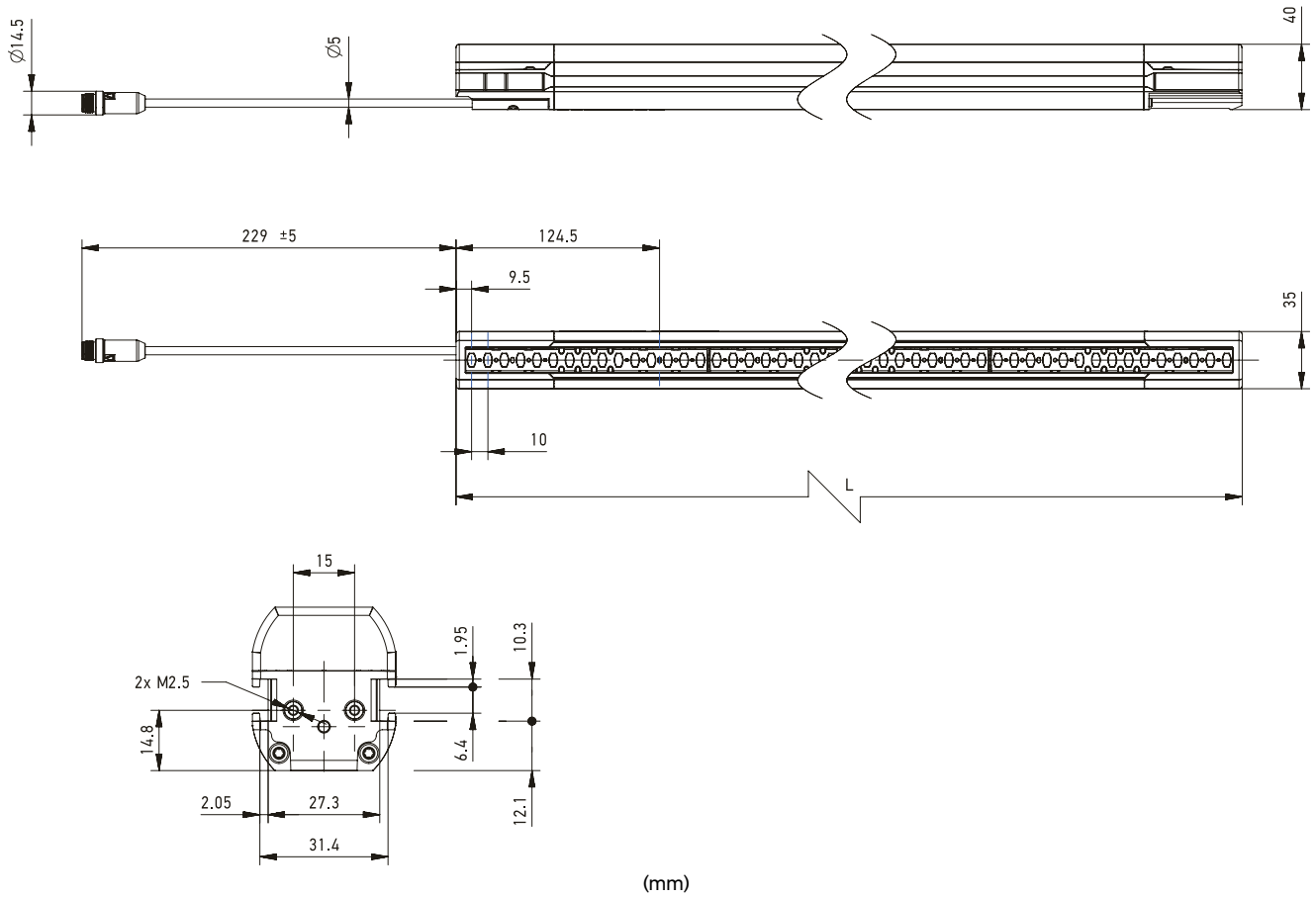
SH4-4-1200-B-5 SH4 Basic



(mm)

MECHANICAL DRAWINGS

SH4-14-**-B-* SH4 Basic**

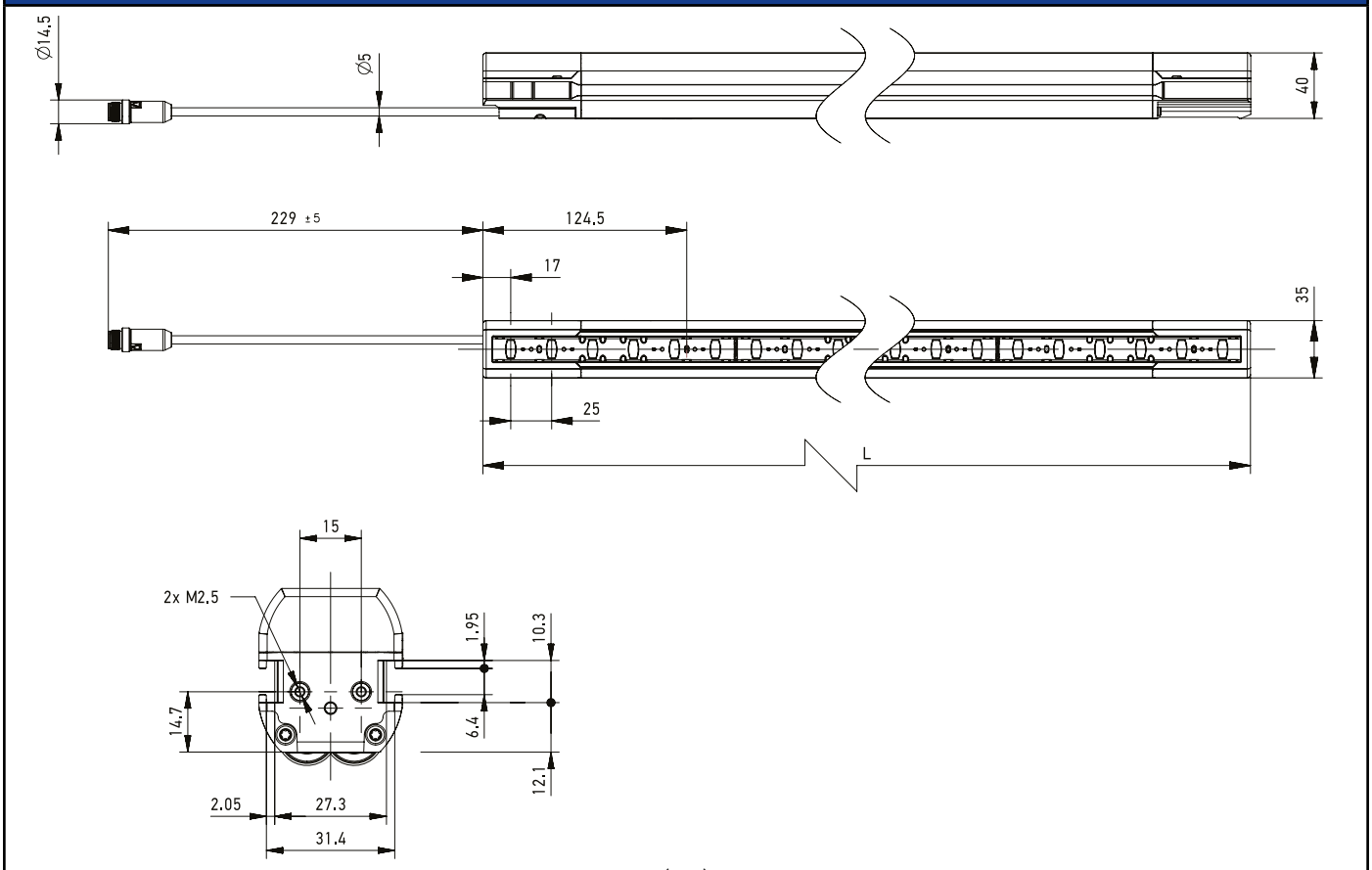


(mm)

Models	L (mm)
SH4-14-0300-B-5	309
SH4-14-0450-B-5	459
SH4-14-0600-B-5	609
SH4-14-7500-B-5	759
SH4-14-9000-B-5	909
SH4-14-1050-B-5	1059
SH4-14-1200-B-5	1209
SH4-14-1300-B-5	1359
SH4-14-1500-B-5	1509
SH4-14-1650-B-5	1659
SH4-14-1800-B-5	1809
SH4-14-1950-B-5	1959
SH4-14-2100-B-5	2109
SH4-14-2250-B-5	2259

MECHANICAL DRAWINGS

SH4-30-**-B-* SH4 Basic**



(mm)

Models	L (mm)
SH4-30-0300-B-5	309
SH4-30-0450-B-5	459
SH4-30-0600-B-5	609
SH4-30-7500-B-5	759
SH4-30-9000-B-5	909
SH4-30-1050-B-5	1059
SH4-30-1200-B-5	1209
SH4-30-1300-B-5	1359
SH4-30-1500-B-5	1509
SH4-30-1650-B-5	1659
SH4-30-1800-B-5	1809
SH4-30-1950-B-5	1959
SH4-30-2100-B-5	2109
SH4-30-2250-B-5	2259

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
Laser pointers	SH-LP	Laser pointer for SH4 light curtains	95ASE0030
Mirrors	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
Mirrors brackets	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4ROT-SH	Rotating brackets for SH4 4 pcs	95ASE0042
Protective stands	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Spare parts	SH-PLUG-5	SH4 plug M12 5 poles	95ASE0047
Test pieces	TP-14	Safety light curtains test piece ø 14 mm	95ACC1630
	TP-30	Safety light curtains test piece ø 30 mm	95ACC1650
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

INTERACTIVE INDEX:
Click on accessories to get to the accessories' section!



DATASENSING
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WEBSITE

SH4 Standard

TYPE 4 SAFETY LIGHT CURTAIN WITH STANDARD FUNCTIONALITY



Standard version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels. Standard models provide EDM and auto/manual restart.

- Finger protection (14 mm)
- Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: up to 70 m
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Monitored height (finger/hand): from 300 to 2250 mm
- Monitored height (body): 500, 800, 900 and 1200 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Complete pair of emitter and receiver and angular brackets included in the package
- Pigtails with M12 connectors with standard not shielded cables

CODE DESCRIPTION

SH 4 - 14 - 0300 - S - 8

series	**SH**	Safety light curtan
type	**4**	Type 4
detection capability	**14**	Finger: 14 mm
	30	Hand: 30 mm
	2	Body: 2 beams
	3	Body: 3 beams
	4	Body: 4 beams
monitored height	**0300**	300 mm
	0450	450 mm
	...	
	2250	2250 mm
	0500	500 mm (2 beams)
	0800	800 mm (3 beams)
	0900	900 mm (4 beams)
	1200	1200 mm (4 beams)
functionality	**S**	Standard
receiver main connector	**8**	8 - pin male M12

TECHNICAL SPECIFICATIONS

	SH4-14-****-S-8	SH4-30-****-S-8
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.5 ... 10 m	0.5 ... 20 m
Controlled height	300 ... 2250 mm	
EMISSION DATA		
Emission	Infrared LED (850nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3.5 W	
Power consumption - Receiver	≤ 4 W without load	
Maximum DC load current	250 mA each output	
Capacitive load tolerated	≤ 1 µF	
MECHANICAL DATA		
Dimensions	35 x 40 x (300 ... 2250) mm	
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT	
Connections	M12-5 poles pigtail (emitter) M12-8 poles pigtail (receiver)	
Length of cables (Power)	≤ 30 m	
CERTIFICATIONS		
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)	
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)	
Electromagnetic compatibility	According to 2014/30/EU Directive	
ENVIRONMENTAL DATA		
Operating Temperature	-30 ... 55 °C	
Storage temperature max.	-30 ... 70 °C	
Mechanical Protection	IP65, IP67	
Humidity	95 %	
Ambient light immunity	According to IEC 61496-2	

TECHNICAL SPECIFICATIONS

	SH4-2-0500-S-8	SH4-3-0800-S-8	SH4-4-****-S-8
		SAFETY TYPE 4	
GENERAL DATA			
Operating principle	Emitter + Receiver		
Detection capability	500 mm	400 mm	300, 400 mm
MONITORED AREA			
Nominal sensing distance	70 m		
Controlled height	500 mm	800 mm	900 ... 1200 mm
EMISSION DATA			
Emission	Infrared LED (850nm)		
Effective beam angle	≤ ±2.5 °		
FUNCTIONS			
Available functions	Manual/Automatic Restart, EDM		
SAFETY PARAMETERS			
Type	4		
PI	e		
SIL	SIL 3 (IEC 61508)		
INPUT/OUTPUT			
Output type	2 x PNP		
ELECTRICAL DATA			
Supply voltage	24 Vdc ±20%		
Power consumption - Emitter	≤ 3.5 W		
Power consumption - Receiver	≤ 4 W without load		
Maximum DC load current	250 mA each output		
Capacitive load tolerated	≤ 1 µF		
MECHANICAL DATA			
Dimensions	35 x 40 x (500) mm	35 x 40 x (800) mm	35 x 40 x (900 ... 1200) mm
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT		
Connections	M12-5 poles pigtail (emitter) M12-8 poles pigtail (receiver)		
Length of cables (Power)	≤ 50 m		
CERTIFICATIONS			
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)		
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)		
Electromagnetic compatibility	According to 2014/30/EU Directive		
ENVIRONMENTAL DATA			
Operating Temperature	-30 ... 55 °C		
Storage temperature max.	-30 ... 70 °C		
Mechanical Protection	IP65, IP67		
Humidity	95 %		
Ambient light immunity	According to IEC 61496-2		

AVAILABLE MODELS

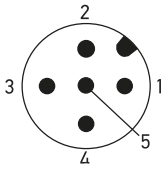
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger protection res. 14 mm	0.5 ... 10 m	300 mm	30	9 ms	**SH4-14-0300-S-8** (957920015)
			450 mm	45	10 ms	**SH4-14-0450-S-8** (957920016)
			600 mm	60	12 ms	**SH4-14-0600-S-8** (957920017)
			750 mm	75	13 ms	**SH4-14-0750-S-8** (957920018)
			900 mm	90	15 ms	**SH4-14-0900-S-8** (957920019)
			1050 mm	105	16 ms	**SH4-14-1050-S-8** (957920020)
			1200 mm	120	18 ms	**SH4-14-1200-S-8** (957920021)
			1350 mm	135	20 ms	**SH4-14-1350-S-8** (957920022)
			1500 mm	150	21 ms	**SH4-14-1500-S-8** (957920023)
			1650 mm	165	23 ms	**SH4-14-1650-S-8** (957920024)
			1800 mm	180	24 ms	**SH4-14-1800-S-8** (957920025)
			1950 mm	195	26 ms	**SH4-14-1950-S-8** (957920026)
			2100 mm	210	27 ms	**SH4-14-2100-S-8** (957920027)
			2250 mm	225	29 ms	**SH4-14-2250-S-8** (957920028)
	Hand protection res. 30 mm	0.5 ... 20 m	300 mm	12	7 ms	**SH4-30-0300-S-8** (957920071)
			450 mm	18	8 ms	**SH4-30-0450-S-8** (957920072)
			600 mm	24	9 ms	**SH4-30-0600-S-8** (957920073)
			750 mm	30		**SH4-30-0750-S-8** (957920074)
			900 mm	36	10 ms	**SH4-30-0900-S-8** (957920075)
			1050 mm	42	11 ms	**SH4-30-1050-S-8** (957920076)
			1200 mm	48	12 ms	**SH4-30-1200-S-8** (957920077)
			1350 mm	54		**SH4-30-1350-S-8** (957920078)
			1500 mm	60	13 ms	**SH4-30-1500-S-8** (957920079)
			1650 mm	66	14 ms	**SH4-30-1650-S-8** (957920080)
			1800 mm	72		**SH4-30-1800-S-8** (957920081)
			1950 mm	78	15 ms	**SH4-30-1950-S-8** (957920082)
			2100 mm	84	16 ms	**SH4-30-2100-S-8** (957920083)
			2250 mm	90	17 ms	**SH4-30-2250-S-8** (957920084)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Body protection 2 beams	70 m 0.5 ... 15 (default); 5 ... 70 (selectable long range)	500 mm	2	12 ms	**SH4-2-0500-S-8** (957920131)
	Body protection 3 beams		800 mm	3	15 ms	**SH4-3-0800-S-8** (957920132)
	Body protection 4 beams		900 mm	4		**SH4-4-0900-S-8** (957920133)
			1200 mm			**SH4-4-1200-S-8** (957920134)

CONNECTIONS

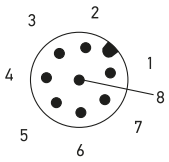
SH4-14-**-S-8 (Emitter)**



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	CODE
5	Gray	NOT USED

SH4-14-**-S-8 (Receiver)**

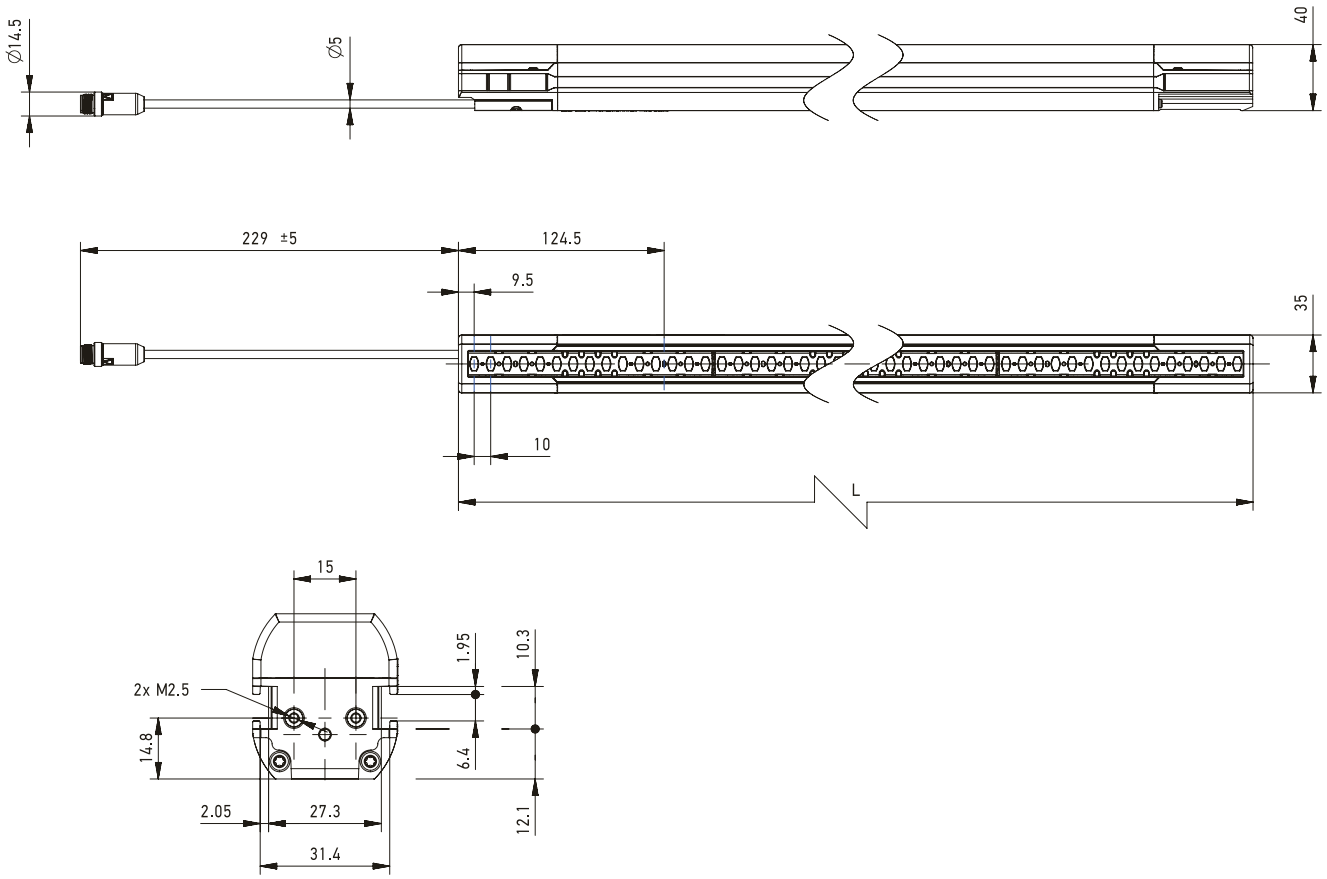


MALE
M12
8 pins

1	White	RESET/RESTART
2	Brown	24 Vdc
3	Green	EDM SELECTION
4	Yellow	EDM INPUT
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0 V
8	Red	MAN/AUTO SELECTION

MECHANICAL DRAWINGS

SH4-14-**-S-8 SH4 Standard**

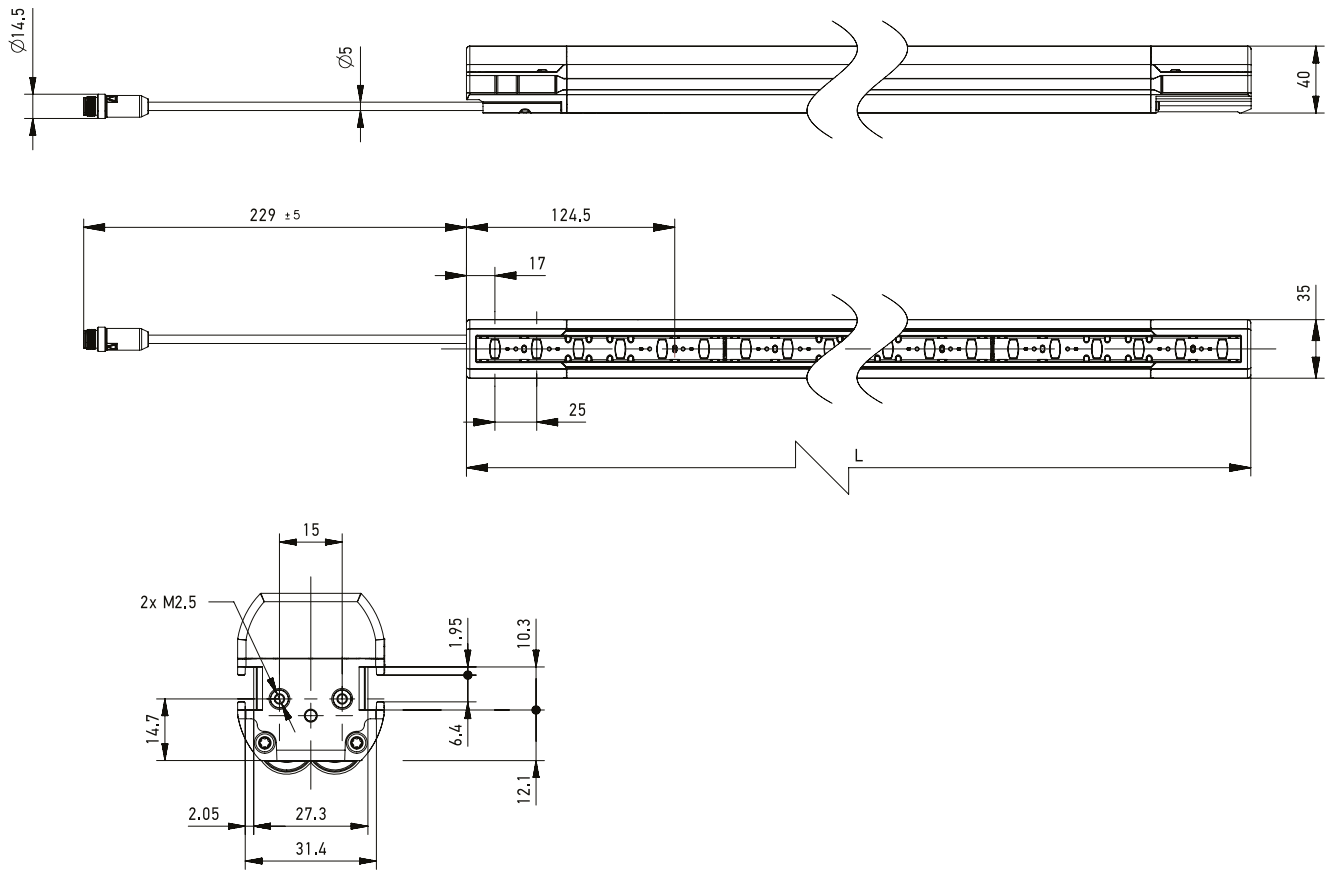


(mm)

Models	L (mm)
SH4-14-0300-S-8	309
SH4-14-0450-S-8	459
SH4-14-0600-S-8	609
SH4-14-7500-S-8	759
SH4-14-9000-S-8	909
SH4-14-1050-S-8	1059
SH4-14-1200-S-8	1209
SH4-14-1300-S-8	1359
SH4-14-1500-S-8	1509
SH4-14-1650-S-8	1659
SH4-14-1800-S-8	1809
SH4-14-1950-S-8	1959
SH4-14-2100-S-8	2109
SH4-14-2250-S-8	2259

MECHANICAL DRAWINGS

SH4-30-**-S-8 SH4 Standard**

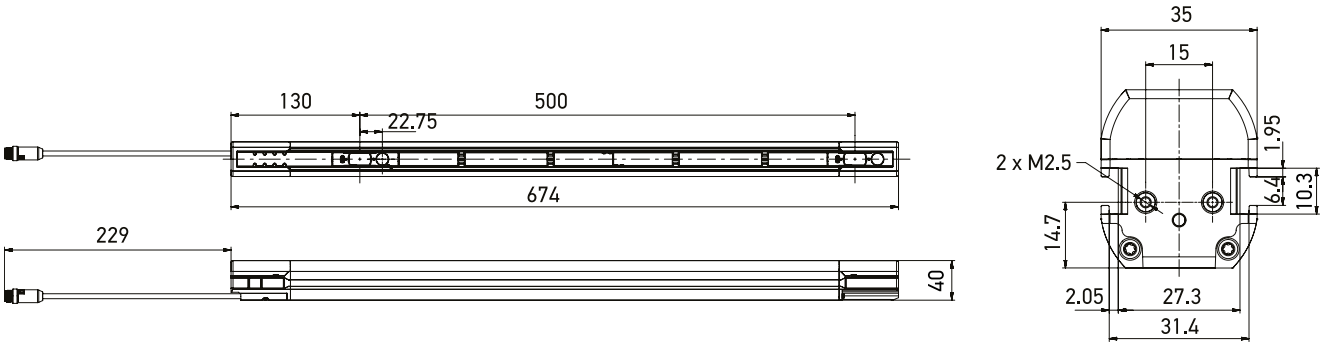


(mm)

Models	L (mm)
SH4-30-0300-S-8	309
SH4-30-0450-S-8	459
SH4-30-0600-S-8	609
SH4-30-7500-S-8	759
SH4-30-9000-S-8	909
SH4-30-1050-S-8	1059
SH4-30-1200-S-8	1209
SH4-30-1300-S-8	1359
SH4-30-1500-S-8	1509
SH4-30-1650-S-8	1659
SH4-30-1800-S-8	1809
SH4-30-1950-S-8	1959
SH4-30-2100-S-8	2109
SH4-30-2250-S-8	2259

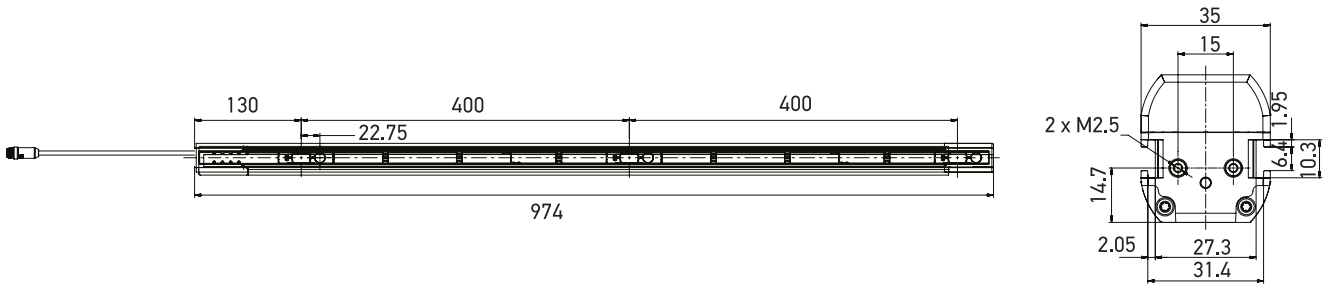
MECHANICAL DRAWINGS

SH4-2-0500-S-8 SH4 Standard



(mm)

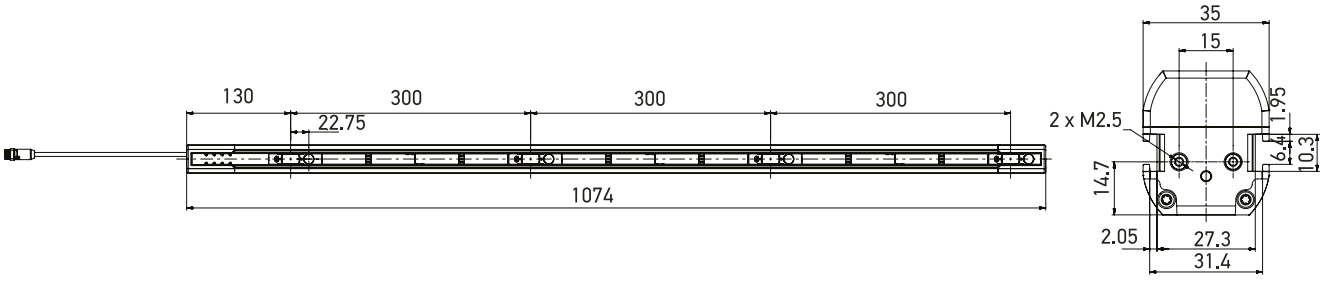
SH4-3-0800-S-8 SH4 Standard



(mm)

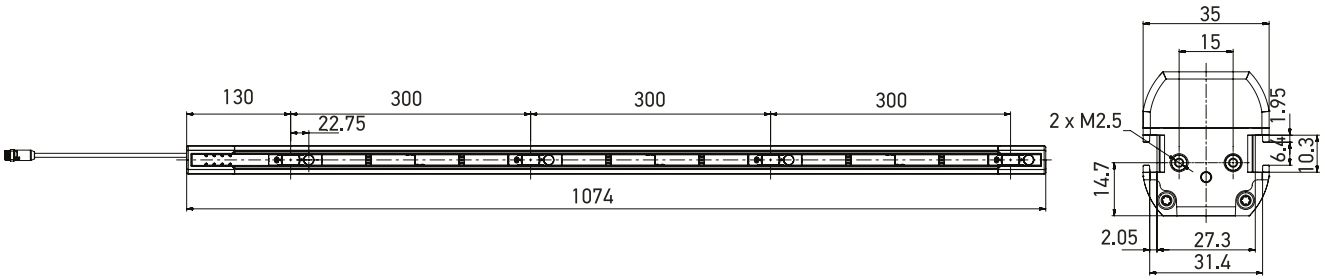
MECHANICAL DRAWINGS

SH4-4-0900-S-8 SH4 Standard



(mm)

SH4-4-0900-S-8 SH4 Standard



(mm)

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CS-A1-06-U-50	Cable M12 8 poles axial female unshielded 50m UL 2464	95A252710
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
Laser pointers	SH-LP	Laser pointer for SH4 light curtains	95ASE0030
Mirrors	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
Mirrors brackets	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4ROT-SH	Rotating brackets for SH4 4 pcs	95ASE0042
Protective stands	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Spare parts	SH-PLUG-5	SH4 plug M12 5 poles	95ASE0047
Test pieces	TP-14	Safety light curtains test piece ø 14 mm	95ACC1630
	TP-30	Safety light curtains test piece ø 30 mm	95ACC1650
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

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WEBSITE

SH4 Standard Muting

TYPE 4 SAFETY LIGHT CURTAIN WITH MUTING FUNCTIONALITY



Standard Muting version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels. These models provide 2-signals mono and bidirectional muting.

- Finger protection (14 mm)
- Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: up to 70 m
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Standard Muting functions: 2-signals mono and bidirectional muting, override
- Configuration of functions with DIP-SW
- Monitored height (finger/hand): from 300 to 2250 mm
- Monitored height (body): 500, 800, 900 and 1200 mm

- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Complete pair of emitter and receiver and angular brackets included in the package
- Anti-interference codes
- Muting accessories available with prewired and preinstalled muting sensors
- Cascadable with SH4 CASCADE up to three units
- Pigtails with M12 connectors with standard not shielded cables
- Integrated LED muting indication

CODE DESCRIPTION

SH 4 - 14 - 0300 - SM - 5 - 5

series	**SH**	Safety light curtan
type	**4**	Type 4
detection capability	**14**	Finger: 14 mm
	30	Hand: 30 mm
	2	Body: 2 beams
	3	Body: 3 beams
	4	Body: 4 beams
monitored height	**0300**	300 mm
	0450	450 mm
	...	
	2250	2250 mm
	0500	500 mm (2 beams)
	0800	800 mm (3 beams)
	0900	900 mm (4 beams)
	1200	1200 mm (4 beams)
functionality	**SM**	Standard muting
receiver main connector	**5**	5 - pin male M12
	8	8 - pin male M12
receiver secondary connector	**5**	5 - pin female M12
		No connector

TECHNICAL SPECIFICATIONS

	SH4-14-****-SM-8-*	SH4-30-****-SM-8-*
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.5 ... 10 m	0.5 ... 20 m
Controlled height	300 ... 2250 mm	
EMISSION DATA		
Emission	Infrared LED (850nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM, L/T 2-signals Muting, Partial Muting, Muting Filter, Override	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3.5 W	
Power consumption - Receiver	≤ 4 W without load	
Maximum DC load current	250 mA each output	
Capacitive load tolerated	≤ 1 µF	
MECHANICAL DATA		
Dimensions	35 x 40 x (300 ... 2250) mm	
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT	
Connections	M12-5 poles pigtail (emitter) M12-8 poles + M12-5 poles pigtails (receiver), M12-5 poles pigtail (emitter) M12-8 poles pigtail (receiver)	
Length of cables (Power)	≤ 30 m	
CERTIFICATIONS		
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)	
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)	
Electromagnetic compatibility	According to 2014/30/EU Directive	
ENVIRONMENTAL DATA		
Operating Temperature	-30 ... 55 °C	
Storage temperature max.	-30 ... 70 °C	
Mechanical Protection	IP65, IP67	
Humidity	95 %	
Ambient light immunity	According to IEC 61496-2	

TECHNICAL SPECIFICATIONS

	SH4-2-0500-SM-8-*	SH4-3-0800-SM-8-*	SH4-4-****-SM-8-*
		SAFETY TYPE 4	
GENERAL DATA			
Operating principle	Emitter + Receiver		
Detection capability	500 mm	400 mm	300, 400 mm
MONITORED AREA			
Nominal sensing distance	70 m		
Controlled height	500 mm	800 mm	900 ... 1200 mm
EMISSION DATA			
Emission	Infrared LED (850nm)		
Effective beam angle	≤ ±2.5 °		
FUNCTIONS			
Available functions	Manual/Automatic Restart, EDM, L/T 2-signals Muting, Partial Muting, Muting Filter, Override		
SAFETY PARAMETERS			
Type	4		
Pl	e		
SIL	SIL 3 (IEC 61508)		
INPUT/OUTPUT			
Output type	2 x PNP		
ELECTRICAL DATA			
Supply voltage	24 Vdc ±20%		
Power consumption - Emitter	≤ 3.5 W		
Power consumption - Receiver	≤ 4 W without load		
Maximum DC load current	250 mA each output		
Capacitive load tolerated	≤ 1 µF		
MECHANICAL DATA			
Dimensions	35 x 40 x (500) mm	35 x 40 x (800) mm	35 x 40 x (900 ... 1200) mm
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT		
Connections	M12-5 poles pigtail (emitter) M12-8 poles pigtail (receiver), M12-5 poles pigtail (emitter) M12-8 poles pigtail + M12-5 poles pigtails (receiver)		
Length of cables (Power)	≤ 50 m		
CERTIFICATIONS			
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)		
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)		
Electromagnetic compatibility	According to 2014/30/EU Directive		
ENVIRONMENTAL DATA			
Operating Temperature	-30 ... 55 °C		
Storage temperature max.	-30 ... 70 °C		
Mechanical Protection	IP65, IP67		
Humidity	95 %		
Ambient light immunity	According to IEC 61496-2		

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time	Model
4	Finger protection res. 14 mm muting 14 mm	0.5 ... 10 m	300 mm	30	9 ms	**SH4-14-0300-SM-8** (957920043)
						SH4-14-0300-SM-8-5 (957920565)
			450 mm	45	10 ms	**SH4-14-0450-SM-8** (957920044)
						SH4-14-0450-SM-8-5 (957920566)
			600 mm	60	12 ms	**SH4-14-0600-SM-8** (957920045)
						SH4-14-0600-SM-8-5 (957920567)
			750 mm	75	13 ms	**SH4-14-0750-SM-8** (957920046)
						SH4-14-0750-SM-8-5 (957920568)
			900 mm	90	15 ms	**SH4-14-0900-SM-8** (957920047)
						SH4-14-0900-SM-8-5 (957920569)
			1050 mm	105	16 ms	**SH4-14-1050-SM-8** (957920048)
						SH4-14-1050-SM-8-5 (957920570)
			1200 mm	120	18 ms	**SH4-14-1200-SM-8** (957920049)
						SH4-14-1200-SM-8-5 (957920571)
			1350 mm	135	20 ms	**SH4-14-1350-SM-8** (957920050)
						SH4-14-1350-SM-8-5 (957920572)
			1500 mm	150	21 ms	**SH4-14-1500-SM-8** (957920051)
						SH4-14-1500-SM-8-5 (957920573)
			1650 mm	165	23 ms	**SH4-14-1650-SM-8** (957920052)
						SH4-14-1650-SM-8-5 (957920574)
			1800 mm	180	24 ms	**SH4-14-1800-SM-8** (957920053)
						SH4-14-1800-SM-8-5 (957920575)
			1950 mm	195	26 ms	**SH4-14-1950-SM-8** (957920054)
						SH4-14-1950-SM-8-5 (957920576)
			2100 mm	210	27 ms	**SH4-14-2100-SM-8** (957920055)
						SH4-14-2100-SM-8-5 (957920577)
			2250 mm	225	29 ms	**SH4-14-2250-SM-8** (957920056)
						SH4-14-2250-SM-8-5 (957920578)

AVAILABLE MODELS

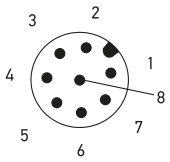
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Hand protection res. 30 mm muting	0.5 ... 20 m	300 mm	12	7 ms	**SH4-30-0300-SM-8-5** (957920085)
						SH4-30-0300-SM-8 (957920099)
			450 mm	18	8 ms	**SH4-30-0450-SM-8-5** (957920086)
						SH4-30-0450-SM-8 (957920100)
			600 mm	24	9 ms	**SH4-30-0600-SM-8-5** (957920087)
						SH4-30-0600-SM-8 (957920101)
			750 mm	30		**SH4-30-0750-SM-8-5** (957920088)
						SH4-30-0750-SM-8 (957920102)
			900 mm	36	10 ms	**SH4-30-0900-SM-8-5** (957920089)
						SH4-30-0900-SM-8 (957920103)
			1050 mm	42	11 ms	**SH4-30-1050-SM-8-5** (957920090)
						SH4-30-1050-SM-8 (957920104)
			1200 mm	48	12 ms	**SH4-30-1200-SM-8-5** (957920091)
						SH4-30-1200-SM-8 (957920105)
			1350 mm	54		**SH4-30-1350-SM-8-5** (957920092)
						SH4-30-1350-SM-8 (957920106)
			1500 mm	60	13 ms	**SH4-30-1500-SM-8-5** (957920093)
						SH4-30-1500-SM-8 (957920107)
			1650 mm	66	14 ms	**SH4-30-1650-SM-8-5** (957920094)
						SH4-30-1650-SM-8 (957920108)
			1800 mm	72		**SH4-30-1800-SM-8-5** (957920095)
						SH4-30-1800-SM-8 (957920109)
			1950 mm	78	15 ms	**SH4-30-1950-SM-8-5** (957920096)
						SH4-30-1950-SM-8 (957920110)
			2100 mm	84	16 ms	**SH4-30-2100-SM-8-5** (957920097)
						SH4-30-2100-SM-8 (957920111)
			2250 mm	90	17 ms	**SH4-30-2250-SM-8-5** (957920098)
						SH4-30-2250-SM-8 (957920112)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time	Model
4	Body protection 2 beams muting 500 mm	70 m 0.5 ... 15 (default); 5 ... 70 (selectable long range)	500 mm	2	12 ms	**SH4-2-0500-SM-8-5** (957920135)
						SH4-2-0500-SM-8 (957920139)
	Body protection 3 beams muting 400 mm		800 mm	3	15 ms	**SH4-3-0800-SM-8-5** (957920136)
						SH4-3-0800-SM-8 (957920140)
	Body protection 4 beams muting 300 mm		900 mm	4		**SH4-4-0900-SM-8-5** (957920137)
						SH4-4-0900-SM-8 (957920141)
	Body protection 4 beams muting 400 mm		1200 mm			**SH4-4-1200-SM-8-5** (957920138)
						SH4-4-1200-SM-8 (957920142)

CONNECTIONS

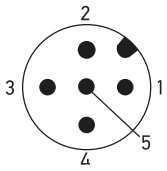
SH4-14-**-SM-8 (Receiver)**



MALE
M12
8 pins

1	White	RESTART/RESET/EDM/ OVERRIDE
2	Brown	24Vdc
3	Green	MUTING1
4	Yellow	MUTING2
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	MUTING LAMP

SH4-14-**-SM-8 (Emitter)**

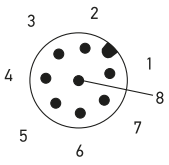


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	CODE
5	Gray	NOT USED

CONNECTIONS

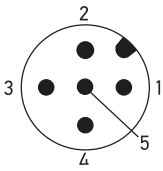
SH4-14-****-SM-8-5 (Receiver)



MALE
M12
8 pins

1	White	RESTART/RESET
2	Brown	24Vdc
3	Green	OVERRIDE1
4	Yellow	EDM
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0 Vdc
8	Red	OVERRIDE2

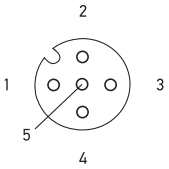
SH4-14-****-SM-8-5 (Emitter)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	CODE
5	Gray	NOT USED

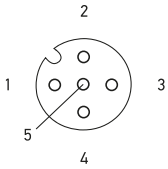
SH4-14-****-SM-8-5 (Emitter)



FEMALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	CODE
5	Gray	COM

SH4-14-****-SM-8-5 (Receiver)

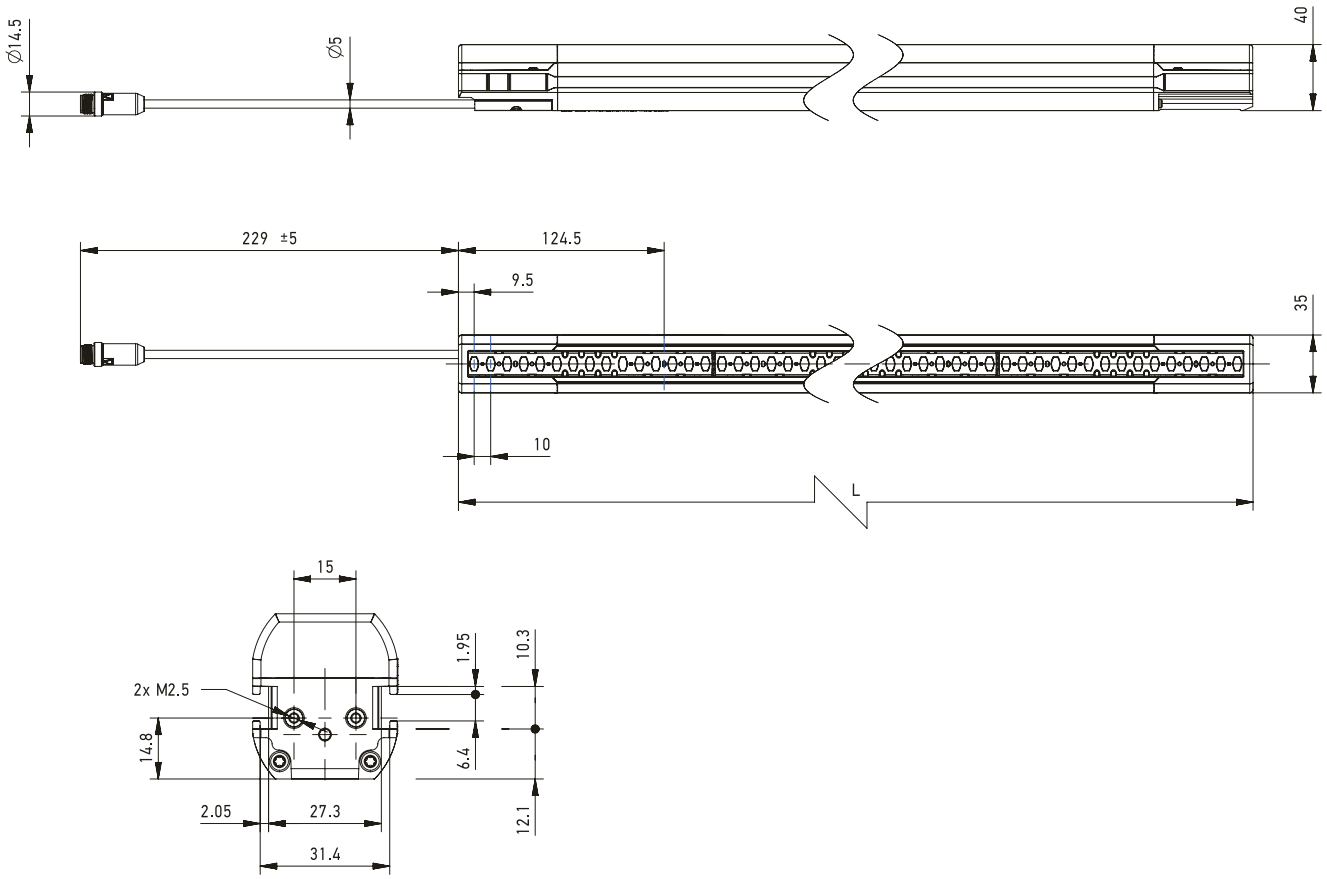


FEMALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	COM

MECHANICAL DRAWINGS

SH4-14-****-SM-8

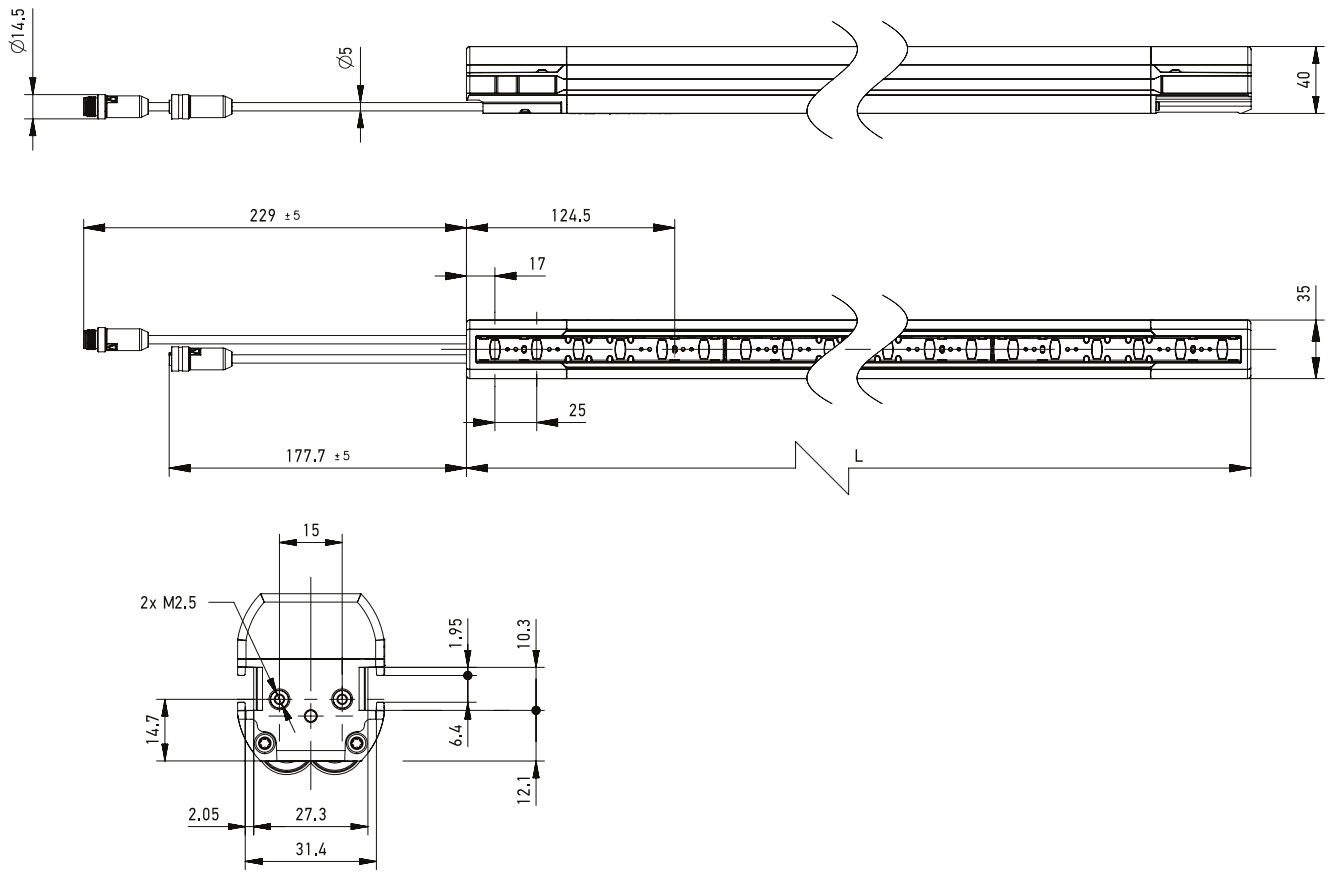


(mm)

Models	L (mm)
SH4-14-0300-SM-8	309
SH4-14-0450-SM-8	459
SH4-14-0600-SM-8	609
SH4-14-7500-SM-8	759
SH4-14-9000-SM-8	909
SH4-14-1050-SM-8	1059
SH4-14-1200-SM-8	1209
SH4-14-1300-SM-8	1359
SH4-14-1500-SM-8	1509
SH4-14-1650-SM-8	1659
SH4-14-1800-SM-8	1809
SH4-14-1950-SM-8	1959
SH4-14-2100-SM-8	2109
SH4-14-2250-SM-8	2259

MECHANICAL DRAWINGS

SH4-30-**-SM-8**

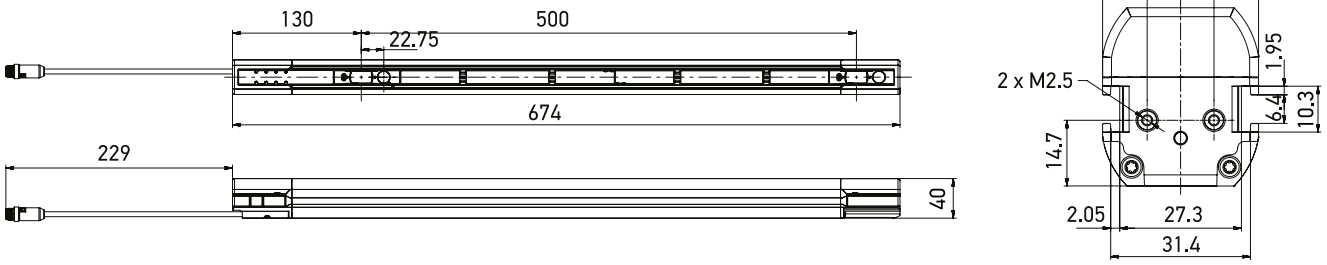


(mm)

Models	L (mm)
SH4-30-0300-SM-8	309
SH4-30-0450-SM-8	459
SH4-30-0600-SM-8	609
SH4-30-7500-SM-8	759
SH4-30-9000-SM-8	909
SH4-30-1050-SM-8	1059
SH4-30-1200-SM-8	1209
SH4-30-1300-SM-8	1359
SH4-30-1500-SM-8	1509
SH4-30-1650-SM-8	1659
SH4-30-1800-SM-8	1809
SH4-30-1950-SM-8	1959
SH4-30-2100-SM-8	2109
SH4-30-2250-SM-8	2259

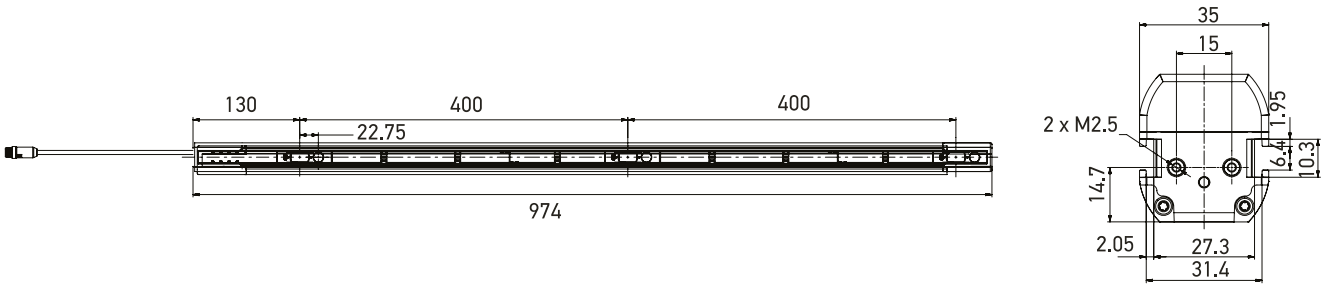
MECHANICAL DRAWINGS

SH4-2-0500-SM-8



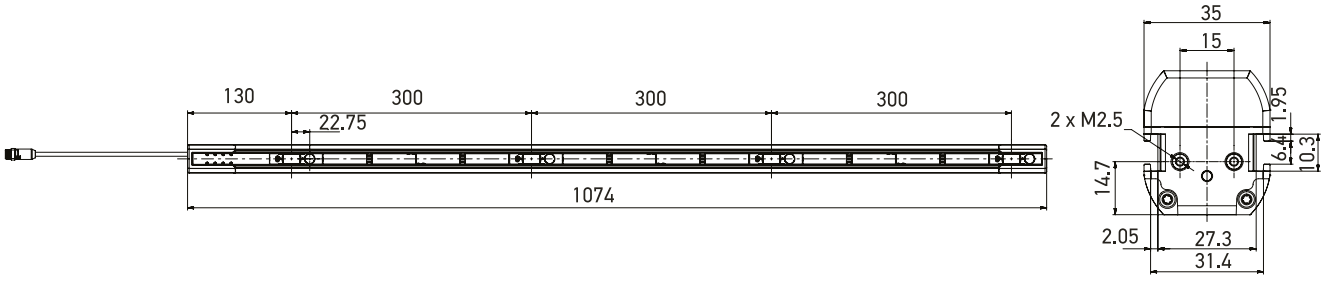
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SH4-3-0800-SM-8



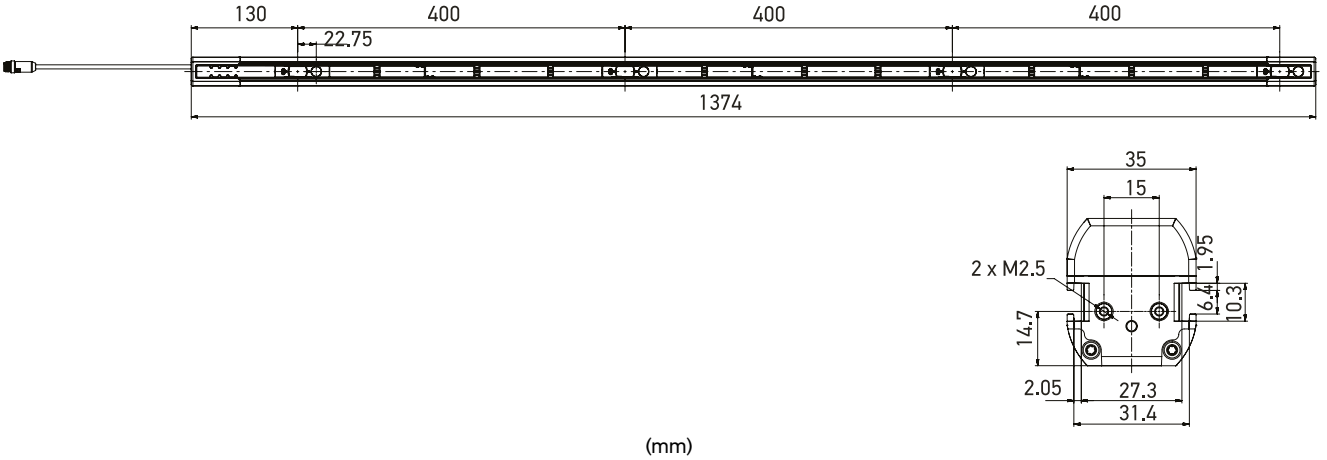
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SH4-4-0900-SM-8



(mm)

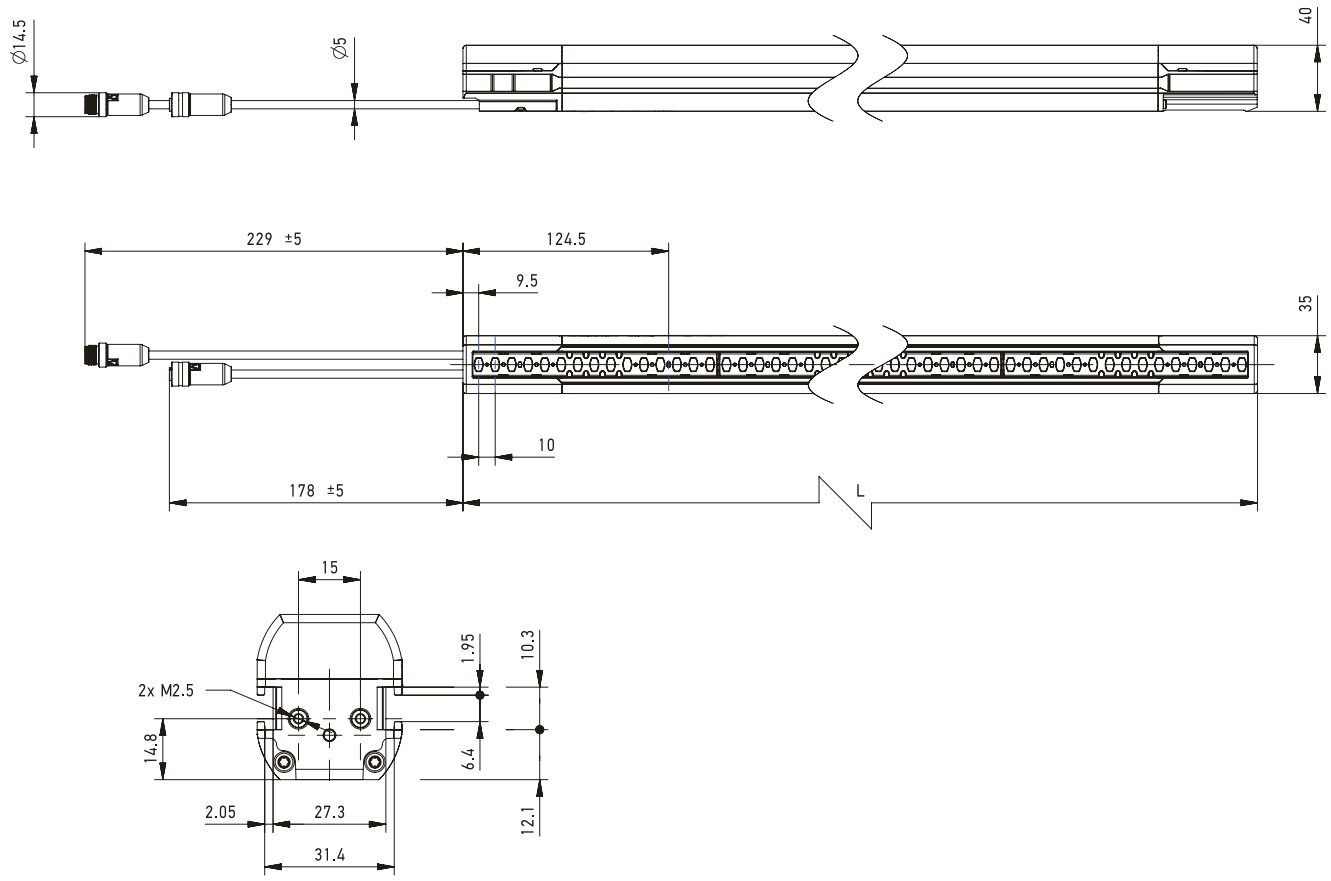
SH4-4-1200-SM-8



(mm)

MECHANICAL DRAWINGS

SH4-14-**-SM-8-5**

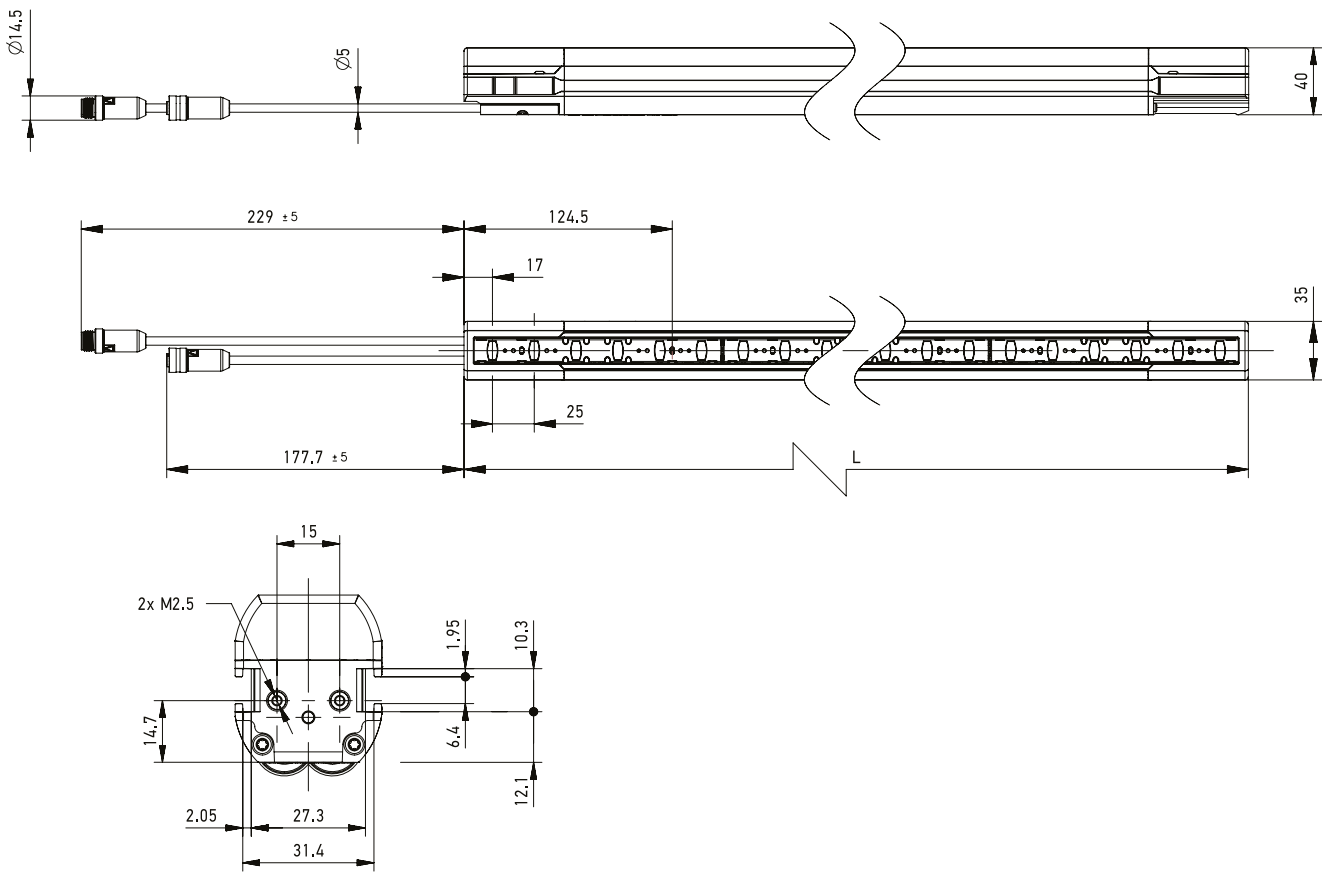


(mm)

Models	L (mm)
SH4-14-0300-SM-8-5	309
SH4-14-0450-SM-8-5	459
SH4-14-0600-SM-8-5	609
SH4-14-7500-SM-8-5	759
SH4-14-9000-SM-8-5	909
SH4-14-1050-SM-8-5	1059
SH4-14-1200-SM-8-5	1209
SH4-14-1300-SM-8-5	1359
SH4-14-1500-SM-8-5	1509
SH4-14-1650-SM-8-5	1659
SH4-14-1800-SM-8-5	1809
SH4-14-1950-SM-8-5	1959
SH4-14-2100-SM-8-5	2109
SH4-14-2250-SM-8-5	2259

MECHANICAL DRAWINGS

SH4-30-**-SM-8-5**

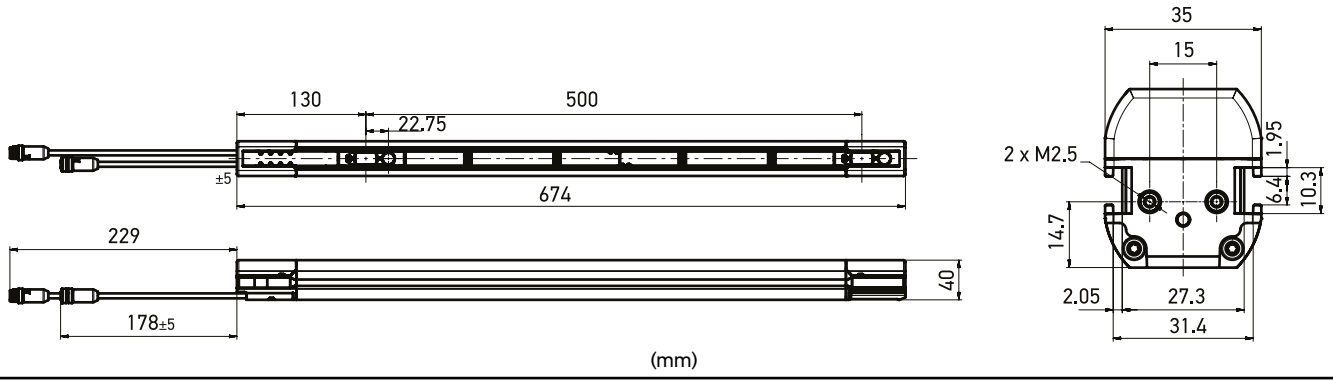


(mm)

Models	L (mm)
SH4-30-0300-SM-8-5	309
SH4-30-0450-SM-8-5	459
SH4-30-0600-SM-8-5	609
SH4-30-7500-SM-8-5	759
SH4-30-9000-SM-8-5	909
SH4-30-1050-SM-8-5	1059
SH4-30-1200-SM-8-5	1209
SH4-30-1300-SM-8-5	1359
SH4-30-1500-SM-8-5	1509
SH4-30-1650-SM-8-5	1659
SH4-30-1800-SM-8-5	1809
SH4-30-1950-SM-8-5	1959
SH4-30-2100-SM-8-5	2109
SH4-30-2250-SM-8-5	2259

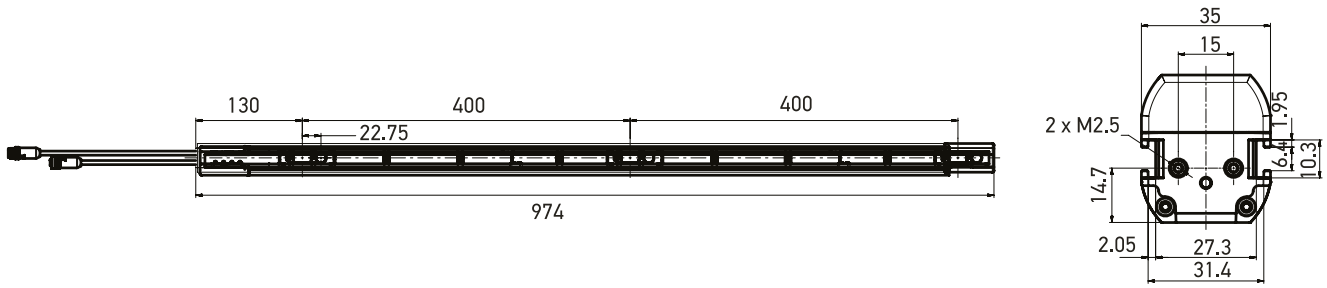
MECHANICAL DRAWINGS

SH4-2-0500-SM-8-5



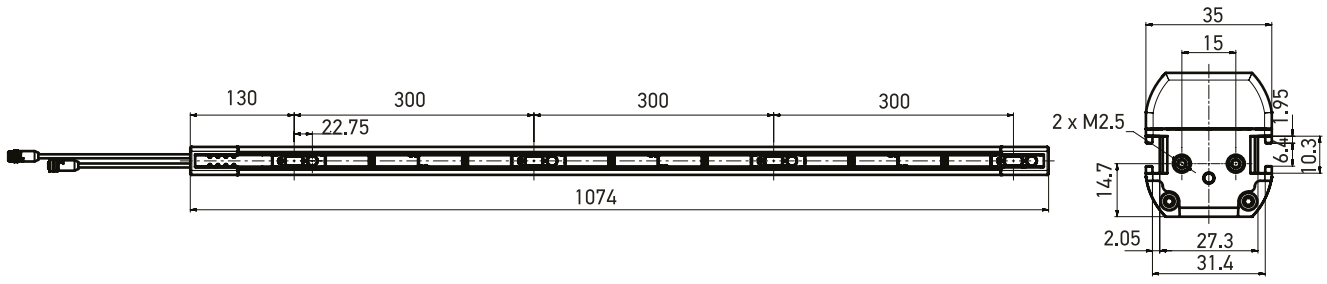
(mm)

SH4-3-0800-SM-8-5



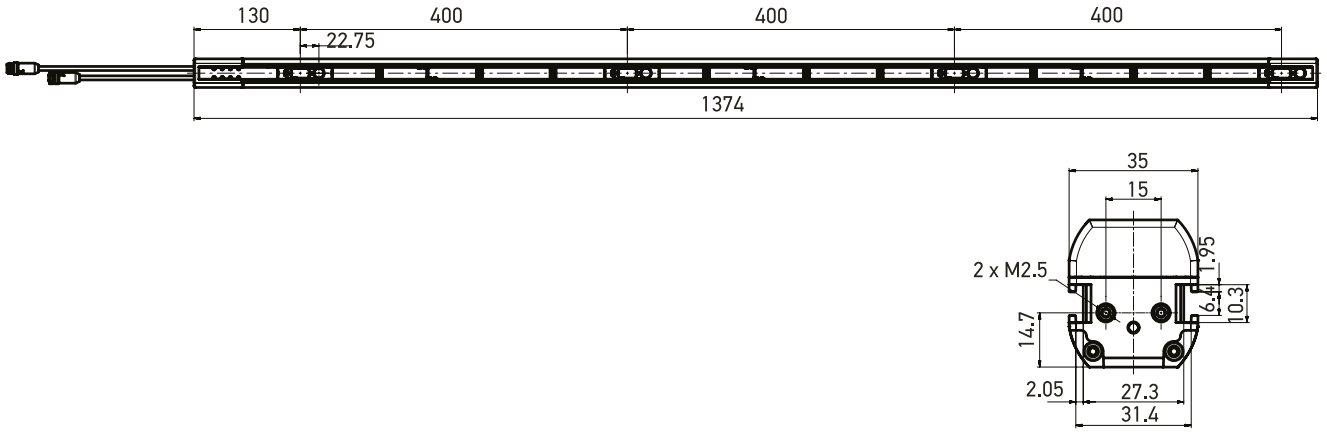
(mm)

SH4-4-0900-SM-8-5



(mm)

SH4-4-1200-SM-8-5



(mm)

ACCESSORIES

	Model	Description	Article code
Adapters	SH-MMA	M12 Male male adaptor 5 poles	95ASE0044
Cables	CS-A1-06-U-50	Cable M12 8 poles axial female unshielded 50m UL 2464	95A252710
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CD12M/0B-050B1	Connector Male M12 Axial 4 poles cable PVC 5 m	CD12M/0B-050B1
	CD12M/0B-100B1	Connector Male M12 Axial 4 poles cable PVC 10 m	CD12M/0B-100B1
Laser pointers	SH-LP	Laser pointer for SH4 light curtains	95ASE0030
Mirrors	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
Mirrors brackets	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4ROT-SH	Rotating brackets for SH4 4 pcs	95ASE0042
Protective stands	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Spare parts	SH-PLUG-5	SH4 plug M12 5 poles	95ASE0047
Test pieces	TP-14	Safety light curtains test piece ø 14 mm	95ACC1630
	TP-30	Safety light curtains test piece ø 30 mm	95ACC1650
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges

NEW!

WEBSITE

SH4 Advanced

PROGRAMMABLE SAFETY LIGHT CURTAIN WITH INTEGRATED AIMERS



Advanced version of SH4, a complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels. The advanced version is characterized by full wi-fi programmability and by integrated alignment aimers.

- Finger protection (14 mm)
- Hand protection (30 mm)
- Body protection (2, 3 or 4 beams)
- Improved operating range: 10-70 m
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Standard Muting functions: 2-signals mono and bidirectional muting, override
- Advanced functions: partial muting, dynamic partial muting, 4-signals muting
- Innovative wireless monitoring and configuration system
- Monitored height (finger/hand): from 300 to 2250 mm

- Monitored height (body): 500, 800, 900 and 1200 mm
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Simultaneous muting and blanking
- Complete pair of emitter and receiver and angular brackets included in the package
- Anti-interference codes
- Alignment eased with red LED
- Integrated LED muting indication
- Muting accessories available with prewired and preinstalled muting sensors
- Pigtails with M12 connectors with standard not shielded cables

SAFETY TYPE 4

CODE DESCRIPTION

SH 4 - 14 - 0600 - SM - 8 - 5

series	**SH**	Safety light curtan
type	**4**	Type 4
detection capability	**14**	Finger: 14 mm
	30	Hand: 30 mm
	2	Body: 2 beams
	3	Body: 3 beams
	4	Body: 4 beams
monitored height	**0300**	300 mm
	0450	450 mm
	...	
	2250	2250 mm
	0500	500 mm (2 beams)
	0800	800 mm (3 beams)
	0900	900 mm (4 beams)
	1200	1200 mm (4 beams)
functionality	**A**	Advanced
receiver main connector	**12**	12 - pin male M12
receiver secondary connector	**5**	5 - pin female M12
		No connector

TECHNICAL SPECIFICATIONS

	SH4-14-****-A-**-*	SH4-30-****-A-**-*
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.5 ... 10 m	0.5 ... 20 m
Controlled height	300 ... 2250 mm	
EMISSION DATA		
Emission	Infrared LED (850nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM, L/T 2-signals Muting, T 4-signals Muting, Partial Muting, Muting Filter, Override, Blanking, Wi-fi programmability	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3.5 W	
Power consumption - Receiver	≤ 4 W without load	
Maximum DC load current	250 mA each output	
Capacitive load tolerated	≤ 1 µF	
MECHANICAL DATA		
Dimensions	35 x 40 x (300 ... 2250) mm	
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT	
Connections	M12-5 poles pigtail (emitter) M12-12 poles + M12-5 poles pigtails (receiver), M12-5 poles pigtail (emitter) M12-12 poles pigtail (receiver)	
Length of cables (Power)	≤ 30 m	
CERTIFICATIONS		
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)	
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)	
Electromagnetic compatibility	According to 2014/30/EU Directive	
ENVIRONMENTAL DATA		
Operating Temperature	-30 ... 55 °C	
Storage temperature max.	-30 ... 70 °C	
Mechanical Protection	IP65, IP67	
Humidity	95 %	
Ambient light immunity	According to IEC 61496-2	

TECHNICAL SPECIFICATIONS

	SH4-2-0500-A-12-5	SH4-3-0800-A-12-5	SH4-4-****-A-12-5
		SAFETY TYPE 4	
GENERAL DATA			
Operating principle	Emitter + Receiver		
Detection capability	500 mm	400 mm	300, 400 mm
MONITORED AREA			
Nominal sensing distance	70 m		
Controlled height	500 mm	800 mm	900 ... 1200 mm
EMISSION DATA			
Emission	Infrared LED (850nm)		
Effective beam angle	≤ ±2.5 °		
FUNCTIONS			
Available functions	Manual/Automatic Restart, EDM, L/T 2-signals Muting, T 4-signals Muting, Partial Muting, Muting Filter, Override, Blanking, Wi-fi programmability		
SAFETY PARAMETERS			
Type	4		
Pl	e		
SIL	SIL 3 (IEC 61508)		
INPUT/OUTPUT			
Output type	2 x PNP		
ELECTRICAL DATA			
Supply voltage	24 Vdc ±20%		
Power consumption - Emitter	≤ 3.5 W		
Power consumption - Receiver	≤ 4 W without load		
Maximum DC load current	250 mA each output		
Capacitive load tolerated	≤ 1 µF		
MECHANICAL DATA			
Dimensions	35 x 40 x (500) mm	35 x 40 x (800) mm	35 x 40 x (900 ... 1200) mm
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT		
Connections	M12-5 poles pigtail (emitter) M12-12 poles + M12-5 poles pigtails (receiver)		
Length of cables (Power)	≤ 50 m		
CERTIFICATIONS			
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)		
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)		
Electromagnetic compatibility	According to 2014/30/EU Directive		
ENVIRONMENTAL DATA			
Operating Temperature	-30 ... 55 °C		
Storage temperature max.	-30 ... 70 °C		
Mechanical Protection	IP65, IP67		
Humidity	95 %		
Ambient light immunity	According to IEC 61496-2		

AVAILABLE MODELS

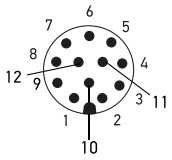
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger protection res. 14 mm Wi-Fi programmable	0.5 ... 10 m	300 mm	30	9 ms	**SH4-14-0300-A-12** (957920147)
						SH4-14-0300-A-12-5 (957920161)
			450 mm	45	10 ms	**SH4-14-0450-A-12** (957920148)
						SH4-14-0450-A-12-5 (957920162)
			600 mm	60	12 ms	**SH4-14-0600-A-12** (957920149)
						SH4-14-0600-A-12-5 (957920163)
			750 mm	75	13 ms	**SH4-14-0750-A-12-5** (957920164)
						SH4-14-0750-A-12 (957920150)
			900 mm	90	15 ms	**SH4-14-0900-A-12** (957920151)
						SH4-14-0900-A-12-5 (957920165)
			1050 mm	105	16 ms	**SH4-14-1050-A-12** (957920152)
						SH4-14-1050-A-12-5 (957920166)
			1200 mm	120	18 ms	**SH4-14-1200-A-12** (957920153)
						SH4-14-1200-A-12-5 (957920167)
			1350 mm	135	20 ms	**SH4-14-1350-A-12** (957920154)
						SH4-14-1350-A-12-5 (957920168)
			1500 mm	150	21 ms	**SH4-14-1500-A-12** (957920155)
						SH4-14-1500-A-12-5 (957920169)
			1650 mm	165	23 ms	**SH4-14-1650-A-12** (957920156)
						SH4-14-1650-A-12-5 (957920170)
			1800 mm	180	24 ms	**SH4-14-1800-A-12** (957920157)
						SH4-14-1800-A-12-5 (957920171)
			1950 mm	195	26 ms	**SH4-14-1950-A-12-5** (957920172)
						SH4-14-1950-A-12 (957920158)
			2100 mm	210	27 ms	**SH4-14-2100-A-12** (957920159)
						SH4-14-2100-A-12-5 (957920173)
			2250 mm	225	29 ms	**SH4-14-2250-A-12** (957920160)
						SH4-14-2250-A-12-5 (957920174)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Hand protection res. 30 mm Wi-Fi programmable	0.5 ... 20 m	300 mm	12	7 ms	**SH4-30-0300-A-12** (957920189)
						SH4-30-0300-A-12-5 (957920203)
			450 mm	18	8 ms	**SH4-30-0450-A-12** (957920190)
						SH4-30-0450-A-12-5 (957920204)
			600 mm	24	9 ms	**SH4-30-0600-A-12** (957920191)
						SH4-30-0600-A-12-5 (957920205)
			750 mm	30		**SH4-30-0750-A-12-5** (957920206)
						SH4-30-0750-A-12 (957920192)
			900 mm	36	10 ms	**SH4-30-0900-A-12** (957920193)
						SH4-30-0900-A-12-5 (957920207)
			1050 mm	42	11 ms	**SH4-30-1050-A-12** (957920194)
						SH4-30-1050-A-12-5 (957920208)
			1200 mm	48	12 ms	**SH4-30-1200-A-12** (957920195)
						SH4-30-1200-A-12-5 (957920209)
			1350 mm	54		**SH4-30-1350-A-12** (957920196)
						SH4-30-1350-A-12-5 (957920210)
			1500 mm	60	13 ms	**SH4-30-1500-A-12** (957920197)
						SH4-30-1500-A-12-5 (957920211)
			1650 mm	66	14 ms	**SH4-30-1650-A-12** (957920198)
						SH4-30-1650-A-12-5 (957920212)
			1800 mm	72		**SH4-30-1800-A-12** (957920199)
						SH4-30-1800-A-12-5 (957920213)
			1950 mm	78	15 ms	**SH4-30-1950-A-12-5** (957920214)
						SH4-30-1950-A-12 (957920200)
			2100 mm	84	16 ms	**SH4-30-2100-A-12** (957920201)
						SH4-30-2100-A-12-5 (957920215)
			2250 mm	90	17 ms	**SH4-30-2250-A-12** (957920202)
						SH4-30-2250-A-12-5 (957920216)
	Body protection 2 beams muting Wi-Fi programmable	70 m 0.5 ... 15 (default); 5 ... 70 (selectable long range)	500 mm	2	12 ms	**SH4-2-0500-A-12-5** (957920231)
			800 mm	3	15 ms	**SH4-3-0800-A-12-5** (957920232)
			900 mm	4		**SH4-4-0900-A-12-5** (957920233)
			1200 mm			**SH4-4-1200-A-12-5** (957920234)

CONNECTIONS

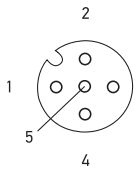
SH4-**-****-A-12 (Receiver)



MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	CONFIGURABLE INPUT
4	Green	CONFIGURABLE INPUT
5	Pink	OSSD2
6	Yellow	CONFIGURABLE INPUT
7	Black	CONFIGURABLE INPUT/ OUTPUT
8	Gray	OSSD1
9	Red	CONFIGURABLE INPUT
10	Violet	CONFIGURABLE OUTPUT
11	Gray /Pink	OVERRIDE2
12	Red/ Blue	CONFIGURABLE INPUT

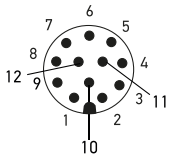
SH4-**-****-A-12 (Emitter)



FEMALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST/POINTER
3	Blue	0 V
4	Black	CODE
5	Gray	COM

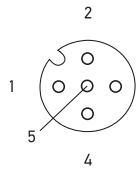
SH4-**-****-A-12-5 (Receiver)



MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	CONFIGURABLE INPUT
4	Green	CONFIGURABLE INPUT
5	Pink	OSSD2
6	Yellow	CONFIGURABLE INPUT
7	Black	CONFIGURABLE INPUT
8	Gray	OSSD1
9	Red	OVERRIDE2
10	Violet	CONFIGURABLE INPUT/ OUTPUT
11	Gray /Pink	CONFIGURABLE INPUT/ OUTPUT
12	Red/ Blue	NOT USED

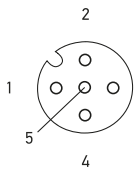
SH4-**-****-A-12-5 (Emitter)



FEMALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST/POINTER
3	Blue	0 V
4	Black	CODE
5	Gray	COM

SH4-**-****-A-12-5 (Receiver)

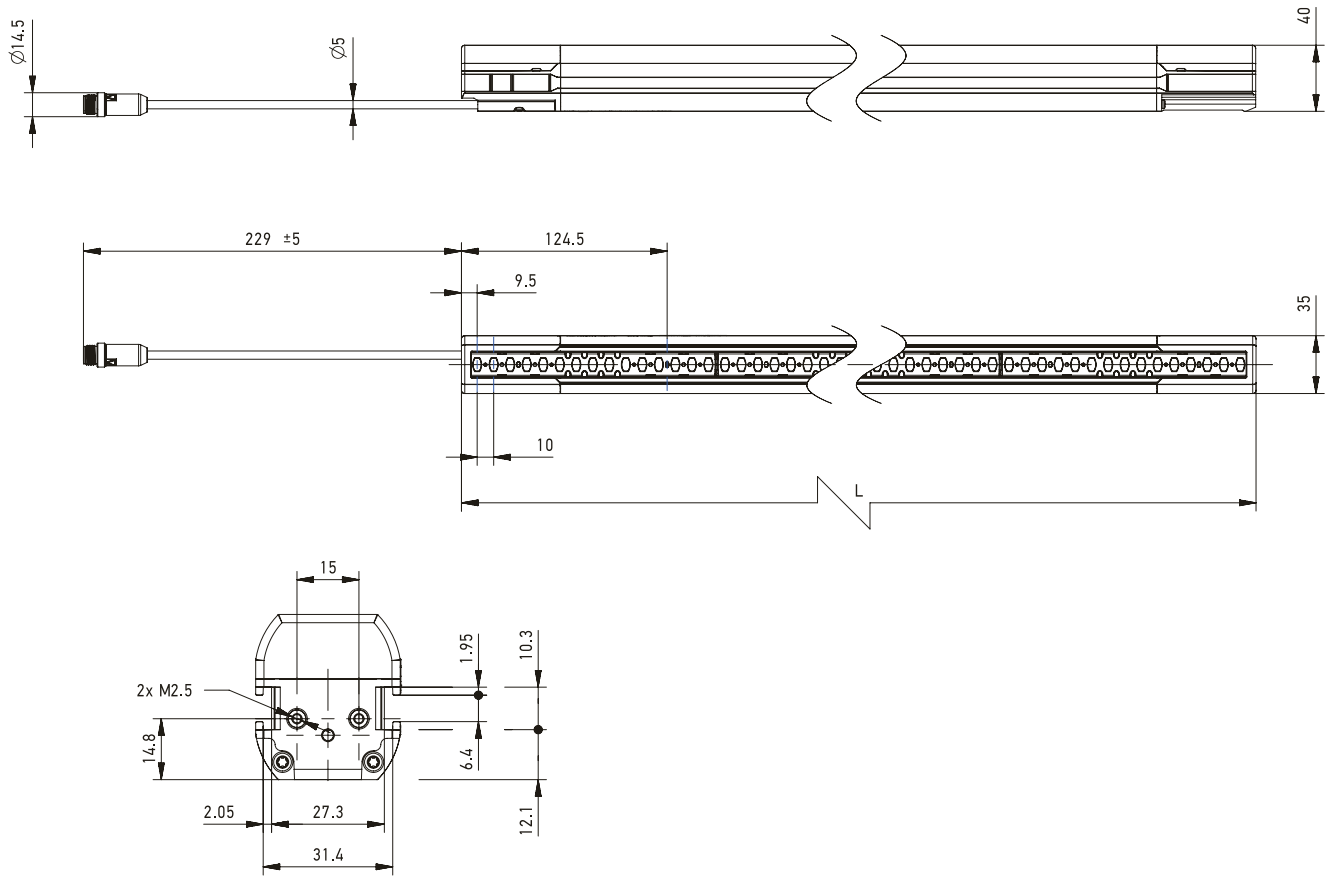


FEMALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	COM

MECHANICAL DRAWINGS

SH4-14-**-A-12 SH4-14-****-*-A-12 SH4 Advanced**

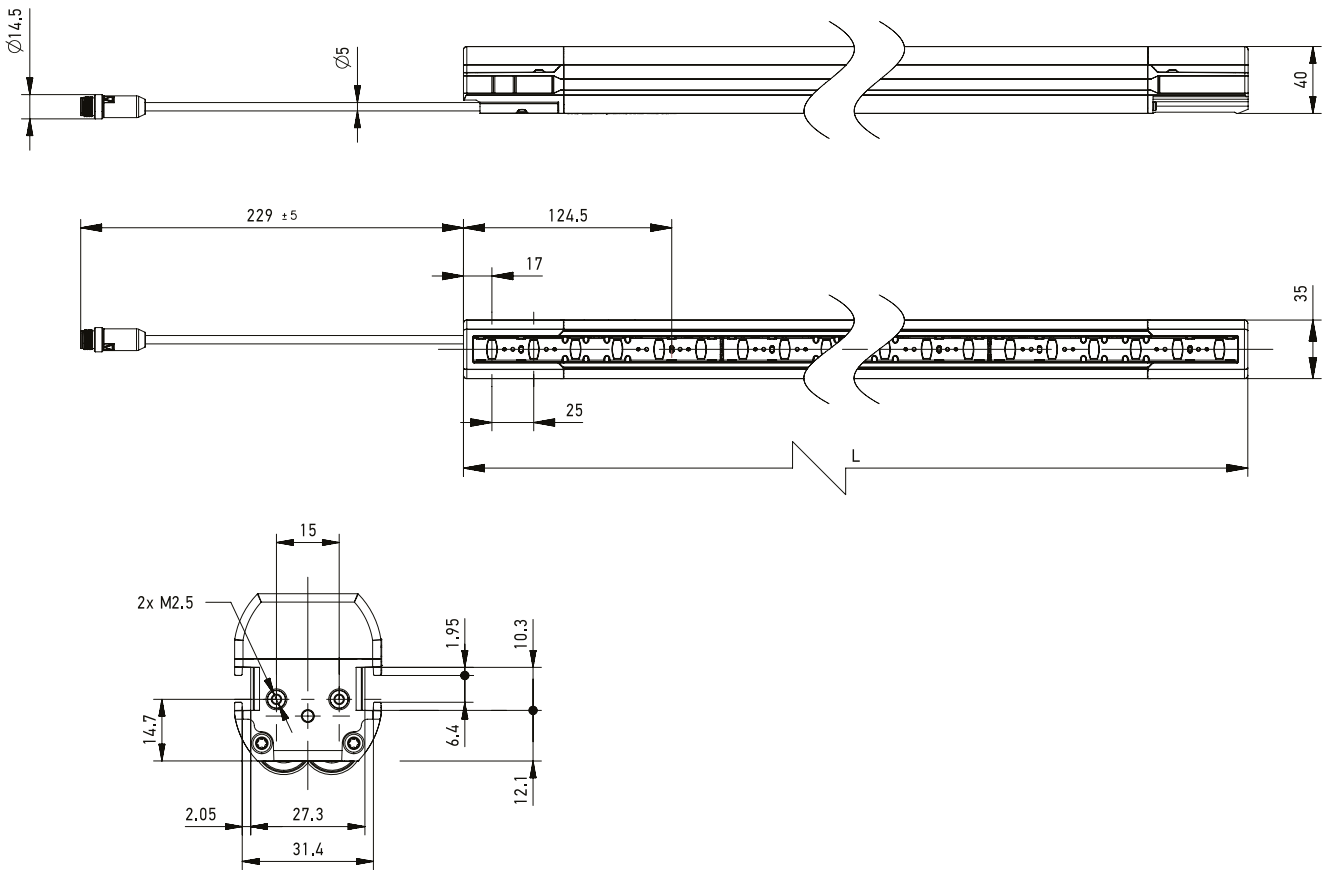


(mm)

Models	L (mm)
SH4-14-0300-A-12	309
SH4-14-0450-A-12	459
SH4-14-0600-A-12	609
SH4-14-7500-A-12	759
SH4-14-9000-A-12	909
SH4-14-1050-A-12	1059
SH4-14-1200-A-12	1209
SH4-14-1300-A-12	1359
SH4-14-1500-A-12	1509
SH4-14-1650-A-12	1659
SH4-14-1800-A-12	1809
SH4-14-1950-A-12	1959
SH4-14-2100-A-12	2109
SH4-14-2250-A-12	2259

MECHANICAL DRAWINGS

SH4-30-****-A-12 SH4-30-****-*-A-12 SH4 Advanced

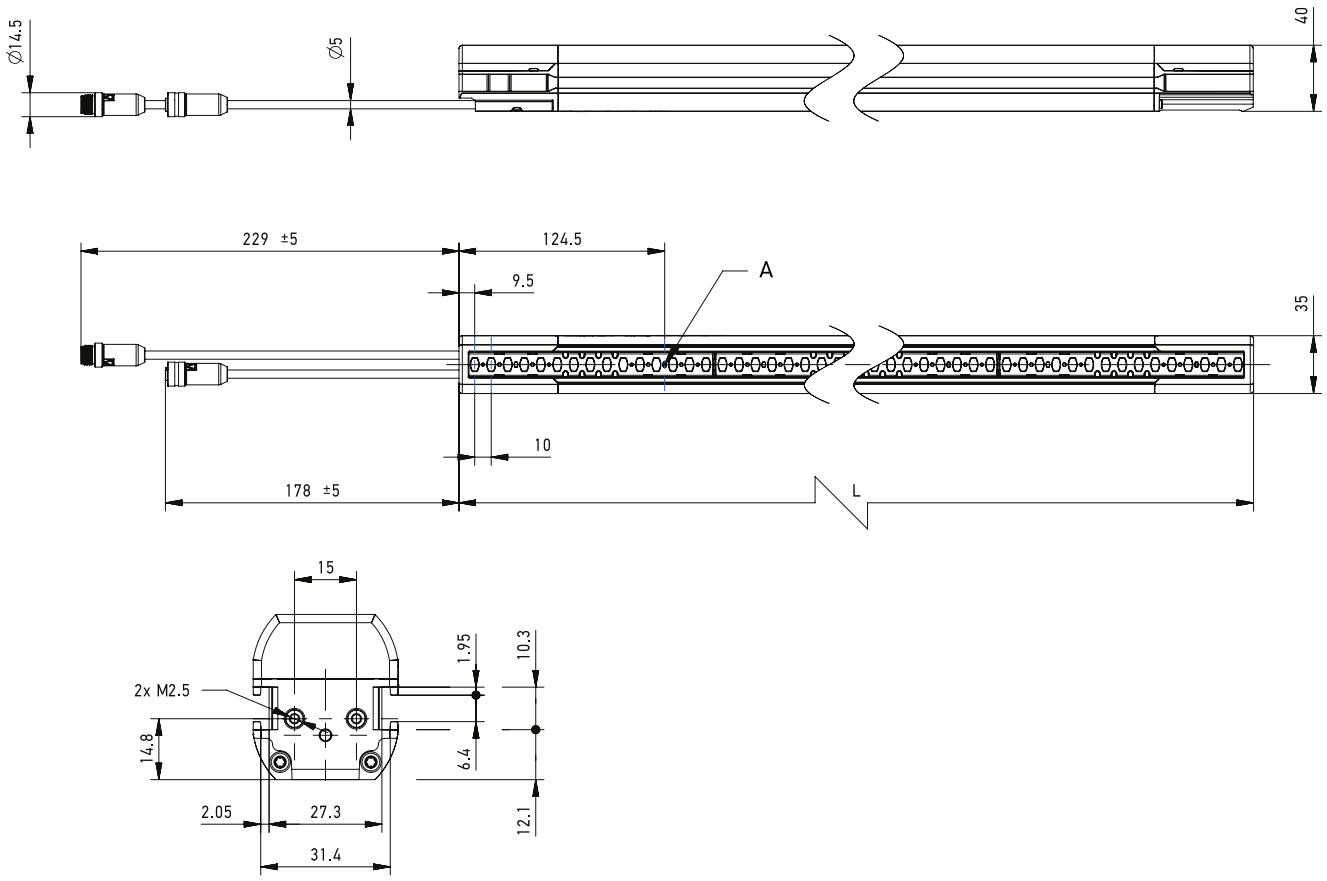


(mm)

Models	L (mm)
SH4-30-0300-A-12	309
SH4-30-0450-A-12	459
SH4-30-0600-A-12	609
SH4-30-7500-A-12	759
SH4-30-9000-A-12	909
SH4-30-1050-A-12	1059
SH4-30-1200-A-12	1209
SH4-30-1300-A-12	1359
SH4-30-1500-A-12	1509
SH4-30-1650-A-12	1659
SH4-30-1800-A-12	1809
SH4-30-1950-A-12	1959
SH4-30-2100-A-12	2109
SH4-30-2250-A-12	2259

MECHANICAL DRAWINGS

SH4-14-**-A-12-5 SH4-14-****-A-12-5 SH4 Advanced - Receiver secondary connector: 5 - pin female M12**

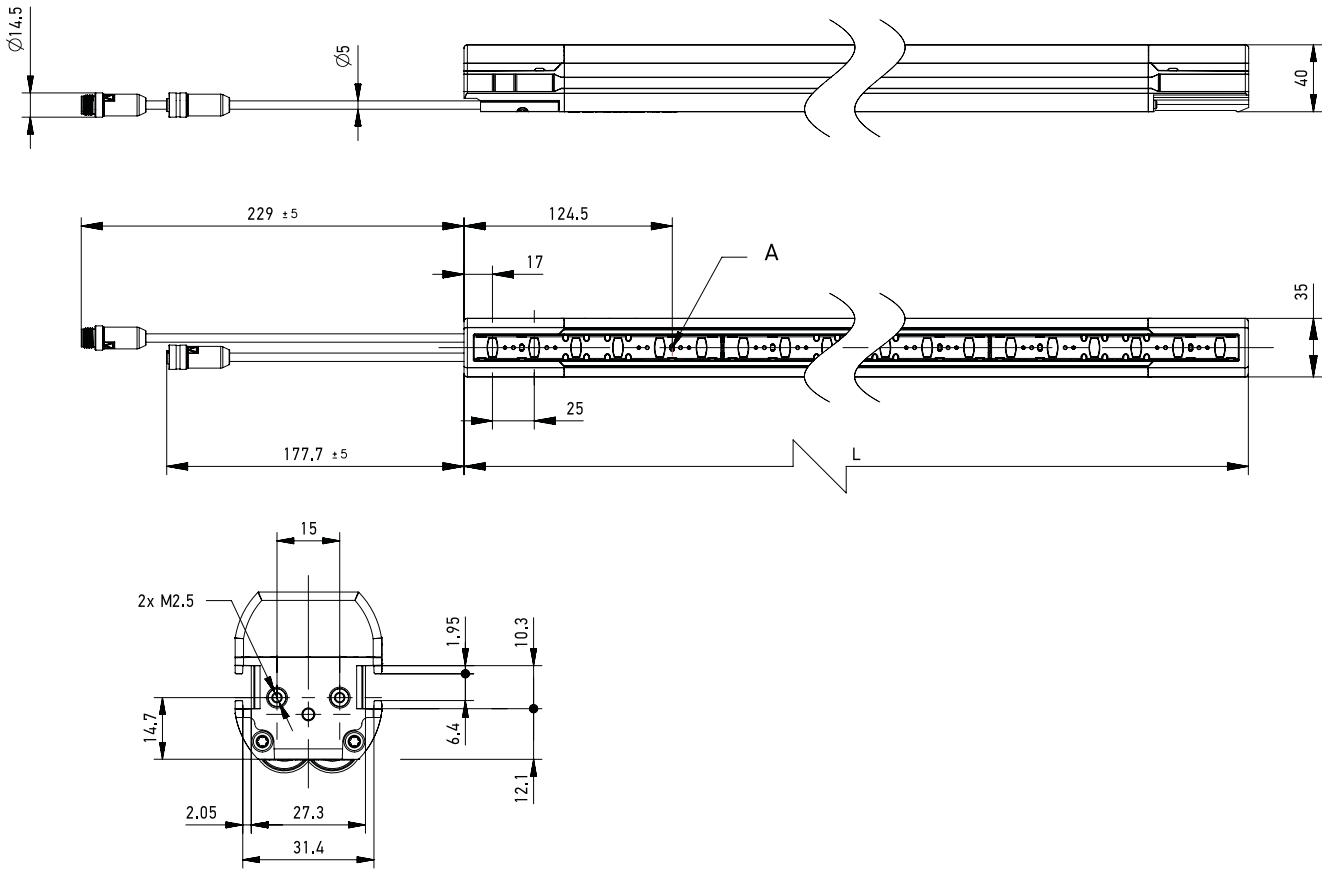


(mm)

Model	L (mm)	A
SH4-14-0300-A-12-5	309	
SH4-14-0450-A-12-5	459	
SH4-14-0600-A-12-5	609	
SH4-14-7500-A-12-5	759	
SH4-14-9000-A-12-5	909	
SH4-14-1050-A-12-5	1059	
SH4-14-1200-A-12-5	1209	
SH4-14-1300-A-12-5	1359	
SH4-14-1500-A-12-5	1509	
SH4-14-1650-A-12-5	1659	Laser aimer
SH4-14-1800-A-12-5	1809	
SH4-14-1950-A-12-5	1959	
SH4-14-2100-A-12-5	2109	
SH4-14-2250-A-12-5	2259	
SH4-14-2400-A-12-5	2409	
SH4-14-2550-A-12-5	2559	
SH4-14-2700-A-12-5	2709	
SH4-14-2850-A-12-5	2859	
SH4-14-3000-A-12-5	3009	

MECHANICAL DRAWINGS

SH4-30-****-A-12-5 SH4-30.****-A-12-5 SH4 Advanced - Receiver secondary connector: 5 - pin female M12

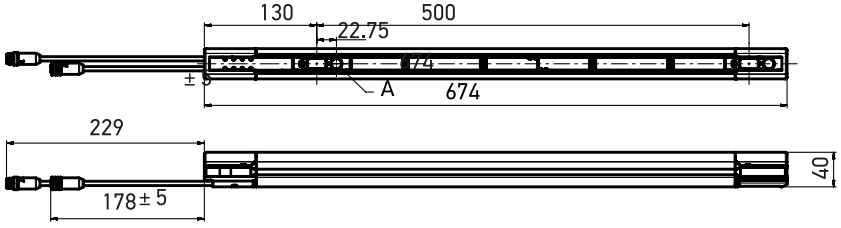


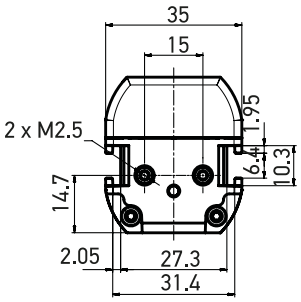
(mm)

Models	L (mm)	A
SH4-30-0300-A-12-5	309	
SH4-30-0450-A-12-5	459	
SH4-30-0600-A-12-5	609	
SH4-30-7500-A-12-5	759	
SH4-30-9000-A-12-5	909	
SH4-30-1050-A-12-5	1059	
SH4-30-1200-A-12-5	1209	
SH4-30-1300-A-12-5	1359	
SH4-30-1500-A-12-5	1509	
SH4-30-1650-A-12-5	1659	Laser aimer
SH4-30-1800-A-12-5	1809	
SH4-30-1950-A-12-5	1959	
SH4-30-2100-A-12-5	2109	
SH4-30-2250-A-12-5	2259	
SH4-30-2400-A-12-5	2409	
SH4-30-2550-A-12-5	2559	
SH4-30-2700-A-12-5	2709	
SH4-30-2850-A-12-5	2859	
SH4-30-3000-A-12-5	3009	

MECHANICAL DRAWINGS

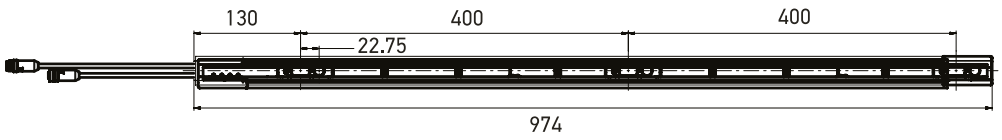
SH4-2-0500-A-12-5 SH4-2-0500-A-12-5 SH4 Advanced - Receiver secondary connector: 5 - pin female M12

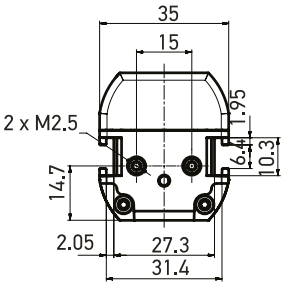




(mm)

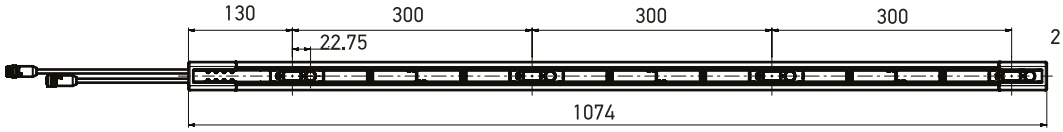
SH4-3-0800-A-12-5 SH4-3-0800-12-5 SH4 Advanced - Receiver secondary connector: 5 - pin female M12

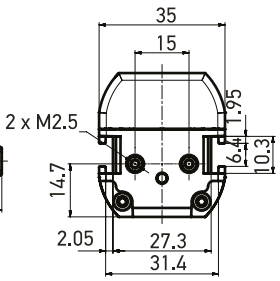




(mm)

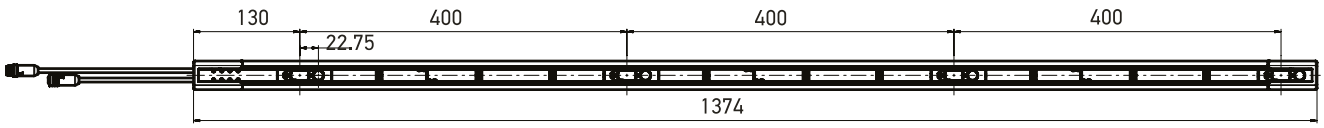
SH4-4-0900-A-12-5 SH4-4-0900-12-5 SH4 Advanced - Receiver secondary connector: 5 - pin female M12

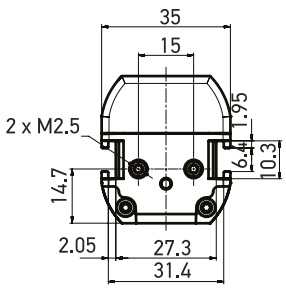




(mm)

SH4-4-1200-A-12-5 SH4-4-1200-12-5 SH4 Advanced - Receiver secondary connector: 5 - pin female M12





(mm)

ACCESSORIES

	Model	Description	Article code
Adapters	SH-MMA	M12 Male male adaptor 5 poles	95ASE0044
Cables	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CD12M/0B-050B1	Connector Male M12 Axial 4 poles cable PVC 5 m	CD12M/0B-050B1
	CD12M/0B-100B1	Connector Male M12 Axial 4 poles cable PVC 10 m	CD12M/0B-100B1
	CS-A1-10-U-03	Cable M12 12 poles axial female unshielded 3m UL 2464	95A252720
	CS-A1-10-U-05	Cable M12 12 poles axial female unshielded 5m UL 2464	95A252730
	CS-A1-10-U-10	Cable M12 12 poles axial female unshielded 10m UL 2464	95A252740
	CS-A1-10-U-15	Cable M12 12 poles axial female unshielded 15m UL 2464	95A252750
	CS-A1-10-U-25	Cable M12 12 poles axial female unshielded 25m UL 2464	95A252760
	CS-A1-10-U-50	Cable M12 12 poles axial female unshielded 50m UL 2464	95A252770
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
Laser pointers	SH-LP	Laser pointer for SH4 light curtains	95ASE0030
Mirrors	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
Mirrors brackets	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4ROT-SH	Rotating brackets for SH4 4 pcs	95ASE0042
Protective stands	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Spare parts	SH-PLUG-5	SH4 plug M12 5 poles	95ASE0047
Test pieces	TP-14	Safety light curtains test piece ø 14 mm	95ACC1630
	TP-30	Safety light curtains test piece ø 30 mm	95ACC1650
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
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WEBSITE

SH4 Active/ Passive

TYPE 4 SAFETY LIGHT CURTAIN WITH ACTIVE/PASSIVE OPERATING PRINCIPLE



The active/passive version of SH4 safety light curtain, with base, standard and advanced functionality

- Type 4 safety light curtains with active/passive operating principle
- Body protection with 500, 800, 900, 1200 mm controlled height
- Up to 8 m operating range (depending on model)
- Basic functions: alignment, automatic restart
- Standard functions: manual restart, EDM
- Standard Muting functions: 2-signals mono and bidirectional muting, override
- Advanced functions: partial muting, 4-signals muting
- Innovative wireless monitoring and configuration system (depending on models)
- Compact profile (35 x 40 mm), common to all SH4 line
- Installation eased by LEDs indications of beam intensity
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Complete pair of active and passive sides and angular brackets included in the package
- Anti-interference codes (depending on models)
- Integrated LED muting indication
- Muting accessories available with prewired and preinstalled muting sensors
- Pigtails with M12 connectors with standard not shielded cables

SAFETY TYPE 4

CODE DESCRIPTION

	SH	4	-	2	-	0500	-	AP	-	5	-	5

series	**SH**	Safety light curtain
type	**4**	Type 4
detection capability	**2**	Body: 2 beams
	3	Body: 3 beams
	4	Body: 4 beams
monitored height	**0500**	500 mm (2 beams)
	0800	800 mm (3 beams)
	0900	900 mm (4 beams)
	1200	1200 mm (4 beams)
functionality	**AP**	Active/Passive
receiver main connector	**5**	5 - pin male M12
	8	8 - pin male M12
	12	12 - pin male M12
receiver secondary connector	**5**	5 - pin female M12

TECHNICAL SPECIFICATIONS

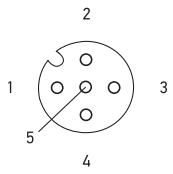
	SH4-2-0500-**-AP-**-*	SH4-3-0800-**-AP-**-*	SH4-4-****-*-AP-**-*
		SAFETY TYPE 4	
GENERAL DATA			
Operating principle	Active Side and Retroreflective Passive Side		
Detection capability	500 mm	400 mm	300, 400 mm
MONITORED AREA			
Nominal sensing distance	0.5 ... 8 m	0.5 ... 6.5 m	0.5 ... 8 m
Controlled height	500 mm	800 mm	900 ... 1200 mm
EMISSION DATA			
Emission	Infrared LED (850nm)		
Effective beam angle	≤ ±2.5 °		
FUNCTIONS			
Available functions	Automatic Restart (SH4-*-****-B-AP-5), Manual/Automatic Restart, EDM, L/T 2-signals Muting, Partial Muting, Muting Filter, Override (SH4-*-****-SM-AP-8), Manual/Automatic Restart, EDM, L/T 2-signals Muting, T 4-signals Muting, Partial Muting, Muting Filter, Override, Wi-fi programmability (SH4-*-****-A-AP-12-5)		
SAFETY PARAMETERS			
Type	4		
Pl	e		
SIL	SIL 3 (IEC 61508)		
INPUT/OUTPUT			
Output type	2 x PNP		
ELECTRICAL DATA			
Supply voltage	24 Vdc ±20%		
Power consumption - Receiver	2 W without load		
Maximum DC load current	250 mA each output		
Capacitive load tolerated	≤ 1 µF		
MECHANICAL DATA			
Dimensions	35 x 40 x (500) mm	35 x 40 x (800) mm	35 x 40 x (900 ... 1200) mm
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT		
Connections	M12-12 poles + M12-5 poles pigtails (receiver), M12-5 poles pigtail, M12-8 poles pigtail		
Length of cables (Power)	≤ 50 m		
CERTIFICATIONS			
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)		
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)		
Electromagnetic compatibility	According to 2014/30/EU Directive		
ENVIRONMENTAL DATA			
Operating Temperature	-30 ... 55 °C		
Storage temperature max.	-30 ... 70 °C		
Mechanical Protection	IP65, IP67		
Humidity	15 ... 95 %		
Ambient light immunity	According to IEC 61496-2		

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Body protection 2 beams	0.5 ... 8 m	500 mm	1	15 ms	**SH4-2-0500-B-AP-5** (957920143)
						SH4-2-0500-A-AP-12-5 (957920239)
						SH4-2-0500-SM-AP-8 (957920561)
	Body protection 3 beams	0.5 ... 6.5 m	800 mm	2		**SH4-3-0800-B-AP-5** (957920144)
						SH4-3-0800-A-AP-12-5 (957920240)
						SH4-3-0800-SM-AP-8 (957920562)
	Body protection 4 beams	0.5 ... 8 m	900 mm			**SH4-4-0900-B-AP-5** (957920145)
						SH4-4-0900-A-AP-12-5 (957920241)
						SH4-4-0900-SM-AP-8 (957920563)
			1200 mm			**SH4-4-1200-B-AP-5** (957920146)
						SH4-4-1200-A-AP-12-5 (957920242)
						SH4-4-1200-SM-AP-8 (957920564)

CONNECTIONS

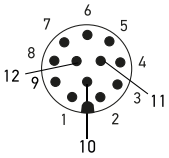
SH4-*-****-A-AP-12-5 (Receiver)



FEMALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	COM

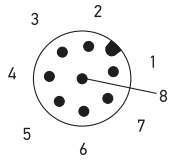
SH4-*-****-A-AP-12-5 (Receiver)



MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	CONFIGURABLE INPUT
4	Green	CONFIGURABLE INPUT
5	Pink	OSSD2
6	Yellow	CONFIGURABLE INPUT
7	Black	CONFIGURABLE INPUT
8	Gray	OSSD1
9	Red	OVERRIDE2
10	Violet	CONFIGURABLE INPUT/ OUTPUT
11	Gray /Pink	CONFIGURABLE INPUT/ OUTPUT
12	Red/ Blue	NOT USED

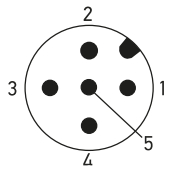
SH4-*-****-SM-AP-8 (Receiver)



MALE
M12
8 pins

1	White	RESTART/RESET/EDM/ OVERRIDE
2	Brown	24Vdc
3	Green	MUTING1
4	Yellow	MUTING2
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	MUTING LAMP

SH4-*-****-B-AP-5 (Receiver)

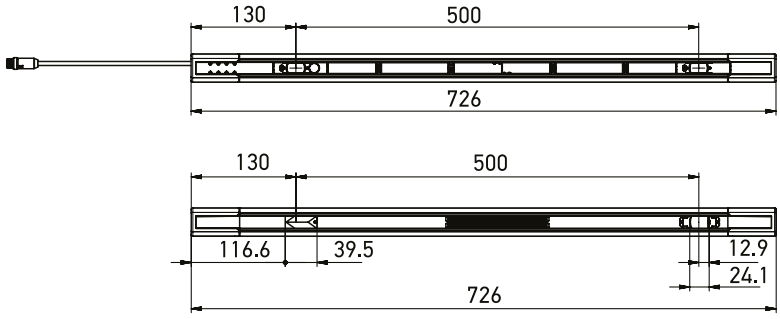


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	OSSD1
3	Blue	0 V
4	Black	OSSD2
5	Gray	COM

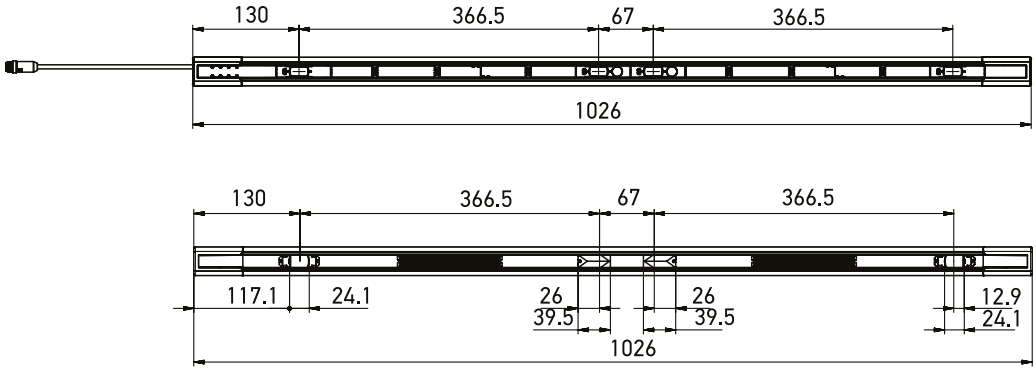
MECHANICAL DRAWINGS

SH4-2-0500-**-AP-* SH4 Active Passive



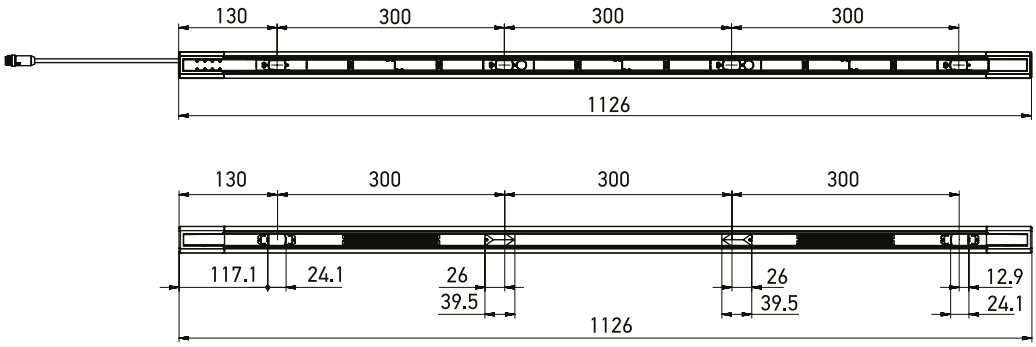
(mm)

SH4-3-0800-**-AP-* SH4 Active Passive



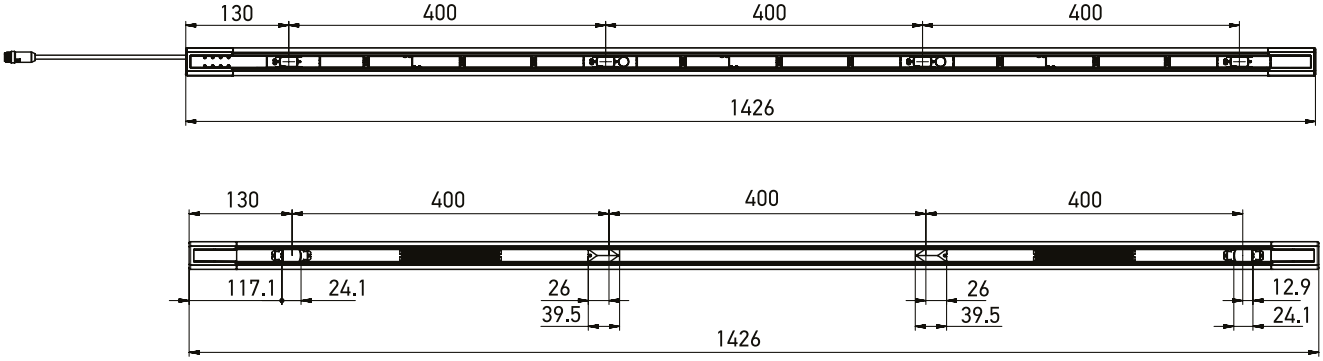
(mm)

SH4-4-0900-**-AP-* SH4 Active Passive



(mm)

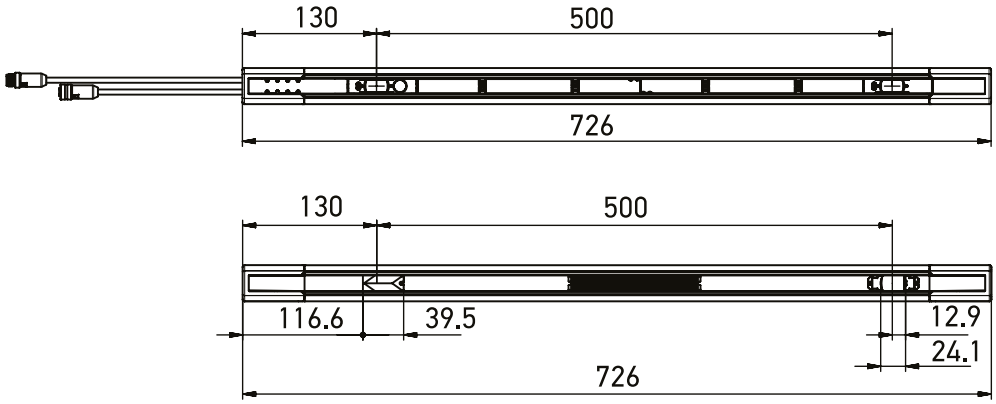
SH4-4-1200-**-AP-* SH4 Active Passive



(mm)

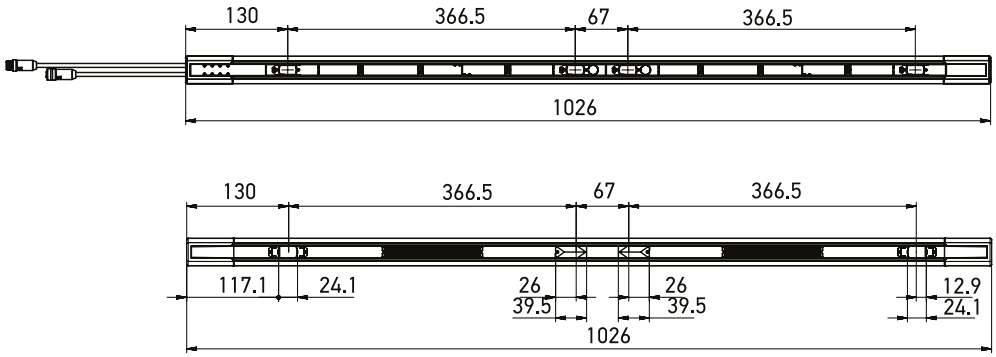
MECHANICAL DRAWINGS

SH4-2-0500-**-AP-**-5 SH4 Active Passive



(mm)

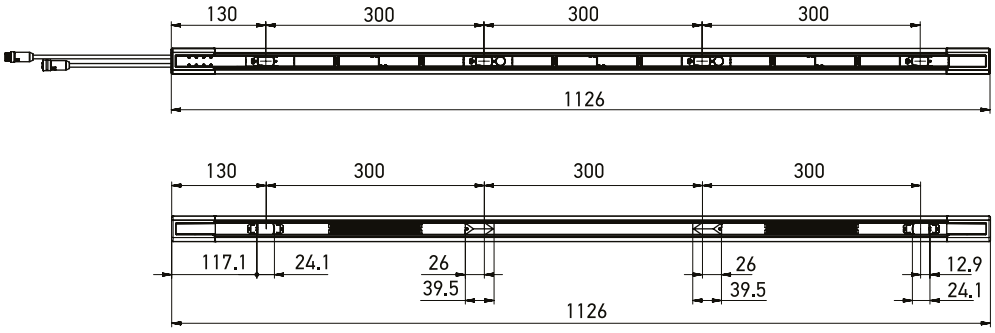
SH4-3-0800-**-AP-**-5 SH4 Active Passive



(mm)

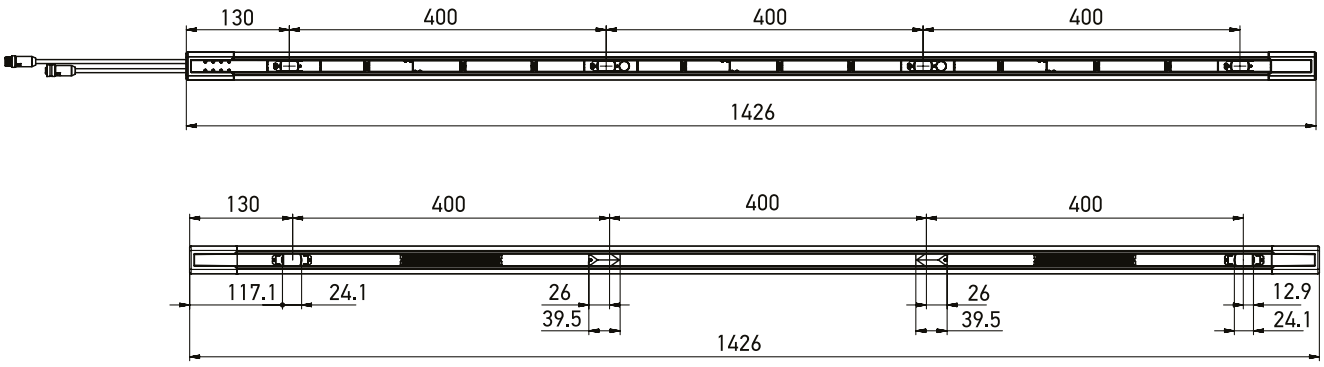
MECHANICAL DRAWINGS

SH4-4-0900-**-AP-**-5 SH4 Active Passive



(mm)

SH4-4-1200-**-AP-**-5 SH4 Active Passive



(mm)

ACCESSORIES

	Model	Description	Article code
Adapters	SH-MMA	M12 Male male adaptor 5 poles	95ASE0044
Cables	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CD12M/0B-050B1	Connector Male M12 Axial 4 poles cable PVC 5 m	CD12M/0B-050B1
	CD12M/0B-100B1	Connector Male M12 Axial 4 poles cable PVC 10 m	CD12M/0B-100B1
	CS-A1-06-U-50	Cable M12 8 poles axial female unshielded 50m UL 2464	95A252710
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-10-U-03	Cable M12 12 poles axial female unshielded 3m UL 2464	95A252720
	CS-A1-10-U-05	Cable M12 12 poles axial female unshielded 5m UL 2464	95A252730
	CS-A1-10-U-10	Cable M12 12 poles axial female unshielded 10m UL 2464	95A252740
	CS-A1-10-U-15	Cable M12 12 poles axial female unshielded 15m UL 2464	95A252750
	CS-A1-10-U-25	Cable M12 12 poles axial female unshielded 25m UL 2464	95A252760
	CS-A1-10-U-50	Cable M12 12 poles axial female unshielded 50m UL 2464	95A252770
Laser pointers	SH-LP	Laser pointer for SH4 light curtains	95ASE0030
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4ROT-SH	Rotating brackets for SH4 4 pcs	95ASE0042
Protective stands	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
Safety units	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Spare parts	SH-PLUG-5	SH4 plug M12 5 poles	95ASE0047
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
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NEW!

WEBSITE

SH4 Cascade

SAFETY LIGHT CURTAIN MODELS FOR CONNECTION WITH SH4 SERIES



Cascade version of SH4. They can be connected to SH4 Advanced and Standard Muting models reaching up to three units, inheriting the functional level of the main one.

- Cascade model, to be used with SH4 STANDARD MUTING or SH4 ADVANCED
- Finger protection (14 mm)
- Hand protection (30 mm)
- Improved operating range: up to 20 m
- Monitored height (finger/hand): from 300 to 2250 mm
- Compact profile (35 x 40 mm), common to all SH4 line

- Installation eased by LEDs indications of beam intensity• Optical synchronization with 2 beams
- IP67 Protection
- -30 ... +55 °C Operating temperature
- Zero dead zone
- Complete pair of emitter and receiver and angular brackets included in the package
- Anti-interference codes
- Cascade cables up to 10 m
- Compatible with Standard Muting or Advanced model, inherits their functionality

SAFETY TYPE 4

CODE DESCRIPTION

SH 4 - 14 - 0300 - C - 5 - 5

series	**SH**	Safety light curtan
type	**4**	Type 4
detection capability	**14**	Finger: 14 mm
	30	Hand: 30 mm
monitored height	**0300**	300 mm
	0450	450 mm
	...	
	2250	2250 mm
	1200	1200 mm (4 beams)
functionality	**C**	Cascade
receiver main connector	**5**	5 - pin male M12
receiver secondary connector	**5**	5 - pin female M12

TECHNICAL SPECIFICATIONS

	SH4-14--****-C-5-5	SH4-30-****-C-5-5
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.5 ... 10 m	0.5 ... 20 m
Controlled height	300 ... 2250 mm	
EMISSION DATA		
Emission	Infrared LED (850nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Cascaded Unit, to be used with SH4 STANDARD MUTING or SH4 ADVANCED	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3.5 W	
Power consumption - Receiver	≤ 4 W without load	
Maximum DC load current	250 mA each output	
Capacitive load tolerated	≤ 1 µF	
MECHANICAL DATA		
Dimensions	35 x 40 x (300 ... 2250) mm	
Material	Painted aluminum / MAKROLON AR 7099 Clear PC / PBT	
Connections	M12-5 poles pigtail (emitter) M12-5 poles pigtail (receiver)	
Length of cables (Power)	≤ 30 m	
CERTIFICATIONS		
Shocks	25 g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)	
Vibrations	10 mm / 3 g, 5 ... 150 Hz frequency (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3)	
Electromagnetic compatibility	According to 2014/30/EU Directive	
ENVIRONMENTAL DATA		
Operating Temperature	-30 ... 55 °C	
Storage temperature max.	-30 ... 70 °C	
Mechanical Protection	IP65, IP67	
Humidity	95 %	
Ambient light immunity	According to IEC 61496-2	

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger protection res. 14 mm cascaded unit	0.5 ... 10 m	300 mm	30	9 ms	**SH4-14-0300-C-5-5** (957920029)
			450 mm	45	10 ms	**SH4-14-0450-C-5-5** (957920030)
			600 mm	60	12 ms	**SH4-14-0600-C-5-5** (957920031)
			750 mm	75	13 ms	**SH4-14-0750-C-5-5** (957920032)
			900 mm	90	15 ms	**SH4-14-0900-C-5-5** (957920033)
			1050 mm	105	16 ms	**SH4-14-1050-C-5-5** (957920034)
			1200 mm	120	18 ms	**SH4-14-1200-C-5-5** (957920035)
			1350 mm	135	20 ms	**SH4-14-1350-C-5-5** (957920036)
			1500 mm	150	21 ms	**SH4-14-1500-C-5-5** (957920037)
			1650 mm	165	23 ms	**SH4-14-1650-C-5-5** (957920038)
			1800 mm	180	24 ms	**SH4-14-1800-C-5-5** (957920039)
			1950 mm	195	26 ms	**SH4-14-1950-C-5-5** (957920040)
			2100 mm	210	27 ms	**SH4-14-2100-C-5-5** (957920041)
			2250 mm	225	29 ms	**SH4-14-2250-C-5-5** (957920042)

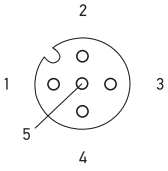
For units in cascade, the overall response time is given by this formula. 2 units: (sum of units response time + 1 ms); 3 units: (sum of units response time - 1 ms)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Hand protection res. 30 mm cascaded unit	0.5 ... 20 m	300 mm	12	7 ms	**SH4-30-0300-C-5-5** (957920113)
			450 mm	18	8 ms	**SH4-30-0450-C-5-5** (957920114)
			600 mm	24	9 ms	**SH4-30-0600-C-5-5** (957920115)
			750 mm	30		**SH4-30-0750-C-5-5** (957920116)
			900 mm	36	10 ms	**SH4-30-0900-C-5-5** (957920117)
			1050 mm	42	11 ms	**SH4-30-1050-C-5-5** (957920118)
			1200 mm	48	12 ms	**SH4-30-1200-C-5-5** (957920119)
			1350 mm	54		**SH4-30-1350-C-5-5** (957920120)
			1500 mm	60	13 ms	**SH4-30-1500-C-5-5** (957920121)
			1650 mm	66	14 ms	**SH4-30-1650-C-5-5** (957920122)
			1800 mm	72		**SH4-30-1800-C-5-5** (957920123)
			1950 mm	78	15 ms	**SH4-30-1950-C-5-5** (957920124)
			2100 mm	84	16 ms	**SH4-30-2100-C-5-5** (957920125)
			2250 mm	90	17 ms	**SH4-30-2250-C-5-5** (957920126)

CONNECTIONS

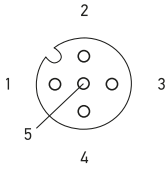
SH4-14-**-C-5-5 (Emitter)**



FEMALE M12 5 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED
5	Gray	COM

SH4-14-**-C-5-5 (Receiver)**

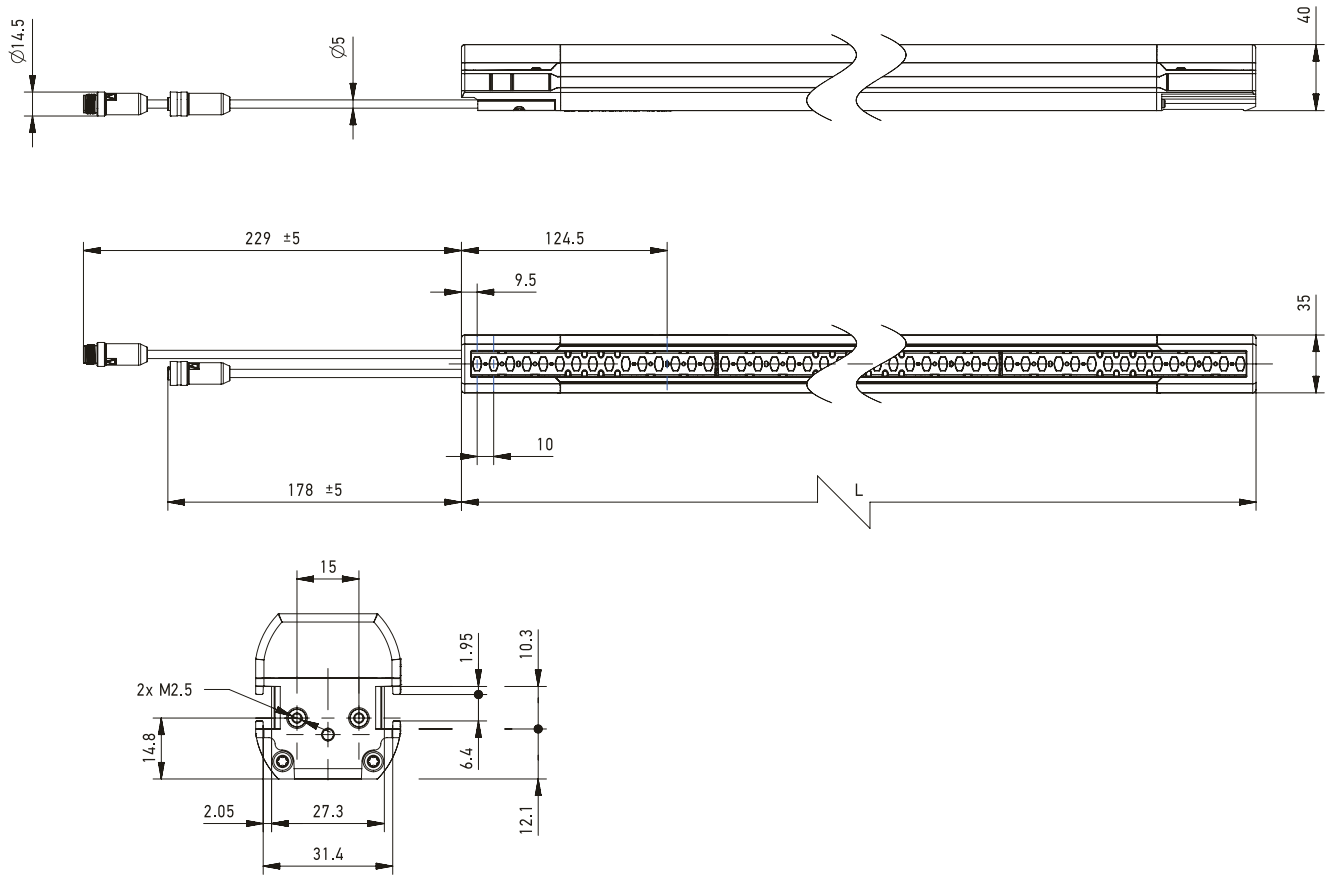


FEMALE M12 5 pins

1	Brown	24 Vdc
2	White	Muting2/Programmable input
3	Blue	0 V
4	Black	Muting1/Programmable input
5	Gray	COM

MECHANICAL DRAWINGS

SH4-14-**-C-5-5 SH4 Cascade**

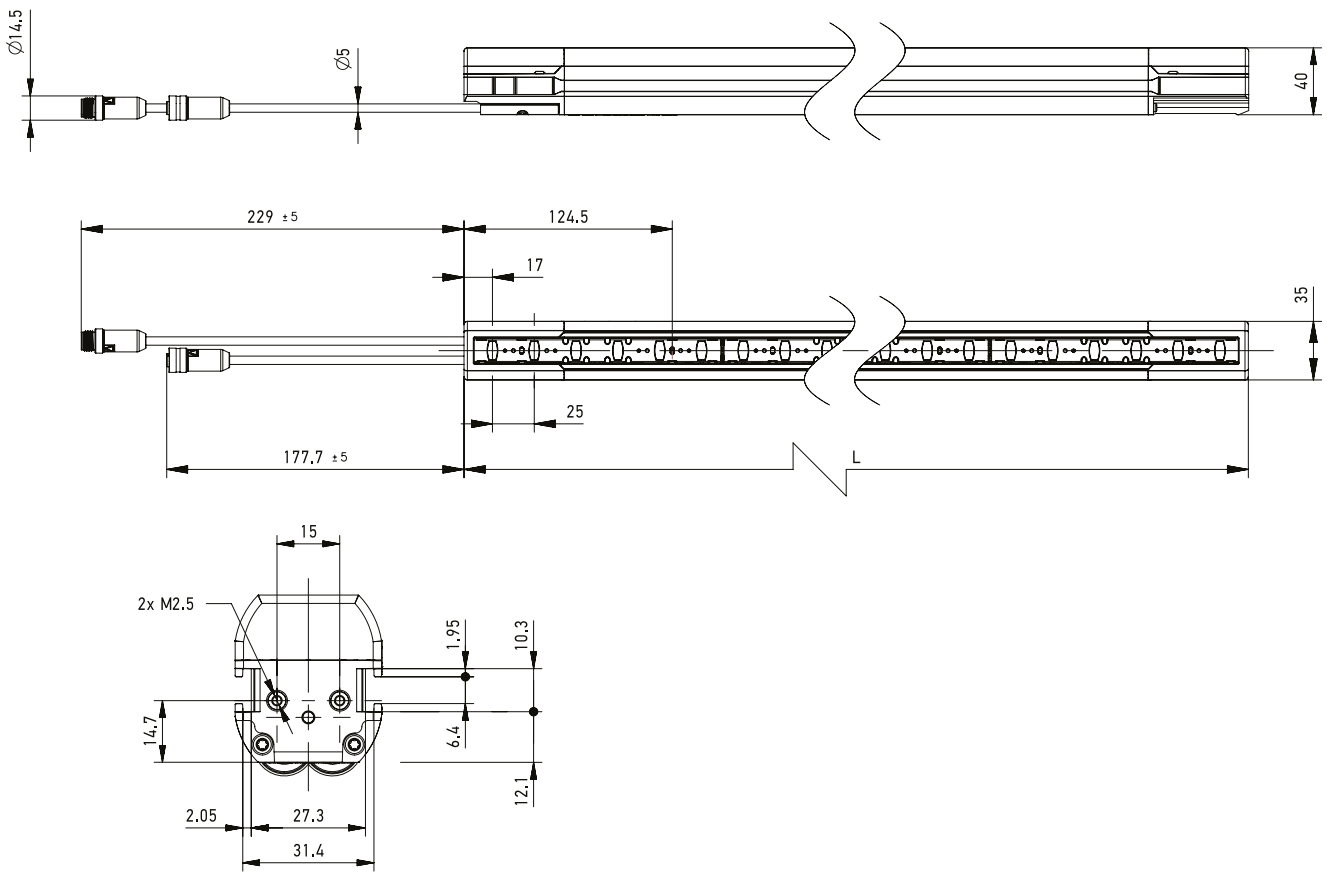


(mm)

Models	L (mm)
SH4-14-0300-C-5-5	309
SH4-14-0450-C-5-5	459
SH4-14-0600-C-5-5	609
SH4-14-7500-C-5-5	759
SH4-14-9000-C-5-5	909
SH4-14-1050-C-5-5	1059
SH4-14-1200-C-5-5	1209
SH4-14-1300-C-5-5	1359
SH4-14-1500-C-5-5	1509
SH4-14-1650-C-5-5	1659
SH4-14-1800-C-5-5	1809
SH4-14-1950-C-5-5	1959
SH4-14-2100-C-5-5	2109
SH4-14-2250-C-5-5	2259

MECHANICAL DRAWINGS

SH4-30-****-C-5-5 SH4 Cascade



(mm)

Models	L (mm)
SH4-30-0300-C-5-5	309
SH4-30-0450-C-5-5	459
SH4-30-0600-C-5-5	609
SH4-30-7500-C-5-5	759
SH4-30-9000-C-5-5	909
SH4-30-1050-C-5-5	1059
SH4-30-1200-C-5-5	1209
SH4-30-1300-C-5-5	1359
SH4-30-1500-C-5-5	1509
SH4-30-1650-C-5-5	1659
SH4-30-1800-C-5-5	1809
SH4-30-1950-C-5-5	1959
SH4-30-2100-C-5-5	2109
SH4-30-2250-C-5-5	2259

ACCESSORIES

	Model	Description	Article code
Adapters	SH-MMA	M12 Male male adaptor 5 poles	95ASE0044
Cables	CD12M/0B-050B1	Connector Male M12 Axial 4 poles cable PVC 5 m	CD12M/0B-050B1
	CD12M/0B-100B1	Connector Male M12 Axial 4 poles cable PVC 10 m	CD12M/0B-100B1
	CS-H2-03-B-01	Cascade cable for SH4 1 m	95ASE0031
	CS-H2-03-B-03	Cascade cable for SH4 3 m	95ASE0032
	CS-H2-03-B-10	Cascade cable for SH4 10 m	95ASE0033
Laser pointers	SH-LP	Laser pointer for SH4 light curtains	95ASE0030
Mirrors	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
Mirrors brackets	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4ROT-SH	Rotating brackets for SH4 4 pcs	95ASE0042
Protective stands	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Spare parts	SH-PLUG-5	SH4 plug M12 5 poles	95ASE0047
Test pieces	TP-14	Safety light curtains test piece ø 14 mm	95ACC1630
	TP-30	Safety light curtains test piece ø 30 mm	95ACC1650
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

DATASENSING
easing automation challenges

WEBSITE

SLIM

ULTRACOMPACT SAFETY LIGHT CURTAIN FINGER/HAND RESOLUTION



Ultra-compact safety light curtain with standard functionality, for applications where space saving and mechanical flexibility is a must.

- Highest mechanical flexibility for a perfect fit into machine structures
- Simple commissioning and maintenanceHigh functional performance
- SLIM profile: 15 x 32 mm
- Pigtail cable with 5-pole M12 connectors
- Same cable for Emitter and Receiver
- No Dead Zone14, 24 and 34 mm resolution
- 34 different protection lengths, with 30 mm modularity
- 3 different brackets shapes
- Cascadable up to 3 units
- Auto/Manual restart and EDM function configuration by wiring
- LED display messages diagnosis

SAFETY TYPE 2 SAFETY TYPE 4

CODE DESCRIPTION

SL 4 - 14 - 0150 - E

series	**SL**	Slim safety light curtain for finger and hand protection
type	**2**	Type 2
	4	Type 4
resolution	**14**	Finger: 14 mm
	24	Hand: 24 mm
	34	Hand: 34 mm
monitored height	**0150**	150 mm
	0210	210 mm
	0270	270 mm
	0300	300 mm
	...	
	1200	1200 mm
version	**E**	EDM, restart

TECHNICAL SPECIFICATIONS

	SL2-**-****-E	SL4-**-***-E
	SAFETY TYPE 2	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14, 24, 34 mm	
MONITORED AREA		
Nominal sensing distance	0.2 ... 6 m	
Controlled height	150 ... 1200 mm	
EMISSION DATA		
Emission	Infrared LED (850nm)	
Effective beam angle	≤ ±5 °	≤ ±2.5 °
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM	
SAFETY PARAMETERS		
Type	2	4
Pl	c	e
SIL	SIL 1 (IEC 61508)	SIL 3 (IEC 61508)
INPUT/OUTPUT		
Output type	2 x PNP (OSSD safety output) with EDM	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 1.6 W	
Power consumption - Receiver	≤ 4.2 W without load	
Maximum DC load current	300 mA each output	
Response time (Master + Slave)	18 ms	
Response time (Master + 2 Slave)	20 ms	
MECHANICAL DATA		
Dimensions	15.4 x 32.6 x (150 ... 1200) mm	
Material	Metal - Aluminium / PMMA / Painted Zamak	
Connections	M12-5 poles pig-tail (emitter) M12-5 poles pig-tail (receiver)	
Length of cables (Power)	≤ 20 m	
CERTIFICATIONS		
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)	
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)	
Electromagnetic compatibility	IEC EN 60947-5-2	
ENVIRONMENTAL DATA		
Operating Temperature	-10 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP65	
Humidity	15 ... 95 % no condensation	
Ambient light immunity	According to IEC 61496-2	

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Finger protection res. 14 mm	0.2 ... 6 m	150 mm	15	7 ms	**SL2-14-0150-E** (957911020)
			210 mm	21	8 ms	**SL2-14-0210-E** (957911030)
			270 mm	27		**SL2-14-0270-E** (957911040)
			300 mm	30		**SL2-14-0300-E** (957911050)
			330 mm	33	9 ms	**SL2-14-0330-E** (957911060)
			360 mm	36		**SL2-14-0360-E** (957911070)
			390 mm	39	10 ms	**SL2-14-0390-E** (957911080)
			420 mm	42		**SL2-14-0420-E** (957911090)
			450 mm	45		**SL2-14-0450-E** (957911100)
			480 mm	48		**SL2-14-0480-E** (957911110)
			510 mm	51	11 ms	**SL2-14-0510-E** (957911120)
			540 mm	54		**SL2-14-0540-E** (957911130)
			570 mm	57		**SL2-14-0570-E** (957911140)
			600 mm	60		**SL2-14-0600-E** (957911150)
			630 mm	63	12 ms	**SL2-14-0630-E** (957911160)
			660 mm	66		**SL2-14-0660-E** (957911170)
			690 mm	69	13 ms	**SL2-14-0690-E** (957911180)
			720 mm	72		**SL2-14-0720-E** (957911190)
			750 mm	75		**SL2-14-0750-E** (957911200)
			780 mm	78		**SL2-14-0780-E** (957911210)
			810 mm	81	14 ms	**SL2-14-0810-E** (957911220)
			840 mm	84		**SL2-14-0840-E** (957911230)
			870 mm	87		**SL2-14-0870-E** (957911240)
			900 mm	90		**SL2-14-0900-E** (957911250)
			930 mm	93	15 ms	**SL2-14-0930-E** (957911260)
			960 mm	96		**SL2-14-0960-E** (957911270)
			990 mm	99	16 ms	**SL2-14-0990-E** (957911280)
			1020 mm	102		**SL2-14-1020-E** (957911290)
			1050 mm	105		**SL2-14-1050-E** (957911300)
			1080 mm	108		**SL2-14-1080-E** (957911310)
			1110 mm	111	17 ms	**SL2-14-1110-E** (957911320)
			1140 mm	114		**SL2-14-1140-E** (957911330)
			1170 mm	117		**SL2-14-1170-E** (957911340)
			1200 mm	120		**SL2-14-1200-E** (957911350)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Hand protection res. 24 mm	0.2 ... 6 m	150 mm	8	7 ms	**SL2-24-0150-E** (957911360)
			210 mm	11		**SL2-24-0210-E** (957911370)
			270 mm	14	8 ms	**SL2-24-0270-E** (957911380)
			300 mm	16		**SL2-24-0300-E** (957911390)
			330 mm	17		**SL2-24-0330-E** (957911400)
			360 mm	19		**SL2-24-0360-E** (957911410)
			390 mm	20		**SL2-24-0390-E** (957911420)
			420 mm	22	9 ms	**SL2-24-0420-E** (957911430)
			450 mm	24		**SL2-24-0450-E** (957911440)
			480 mm	25		**SL2-24-0480-E** (957911450)
			510 mm	27		**SL2-24-0510-E** (957911460)
			540 mm	28		**SL2-24-0540-E** (957911470)
			570 mm	30		**SL2-24-0570-E** (957911480)
			600 mm	32		**SL2-24-0600-E** (957911490)
			630 mm	33	10 ms	**SL2-24-0630-E** (957911500)
			660 mm	35		**SL2-24-0660-E** (957911510)
			690 mm	36		**SL2-24-0690-E** (957911520)
			720 mm	38		**SL2-24-0720-E** (957911530)
			750 mm	40		**SL2-24-0750-E** (957911540)
			780 mm	41		**SL2-24-0780-E** (957911550)
			810 mm	43	11 ms	**SL2-24-0810-E** (957911560)
			840 mm	44		**SL2-24-0840-E** (957911570)
			870 mm	46		**SL2-24-0870-E** (957911580)
			900 mm	48		**SL2-24-0900-E** (957911590)
			930 mm	49		**SL2-24-0930-E** (957911600)
			960 mm	51		**SL2-24-0960-E** (957911610)
			990 mm	52	12 ms	**SL2-24-0990-E** (957911620)
			1020 mm	54		**SL2-24-1020-E** (957911630)
			1050 mm	56		**SL2-24-1050-E** (957911640)
			1080 mm	57		**SL2-24-1080-E** (957911650)
			1110 mm	59		**SL2-24-1110-E** (957911660)
			1140 mm	60		**SL2-24-1140-E** (957911670)
			1170 mm	62	13 ms	**SL2-24-1170-E** (957911680)
			1200 mm	64		**SL2-24-1200-E** (957911690)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Hand protection res. 34 mm	0.2 ... 6 m	150 mm	6	7 ms	**SL2-34-0150-E** (957911700)
			210 mm	8		**SL2-34-0210-E** (957911710)
			270 mm	10	8 ms	**SL2-34-0270-E** (957911720)
			300 mm	11		**SL2-34-0300-E** (957911730)
			330 mm	12		**SL2-34-0330-E** (957911740)
			360 mm	13	9 ms	**SL2-34-0360-E** (957911750)
			390 mm	14		**SL2-34-0390-E** (957911760)
			420 mm	15		**SL2-34-0420-E** (957911770)
			450 mm	16		**SL2-34-0450-E** (957911780)
			480 mm	17	10 ms	**SL2-34-0480-E** (957911790)
			510 mm	18		**SL2-34-0510-E** (957911800)
			540 mm	19		**SL2-34-0540-E** (957911810)
			570 mm	20		**SL2-34-0570-E** (957911820)
			600 mm	21		**SL2-34-0600-E** (957911830)
			630 mm	22	11 ms	**SL2-34-0630-E** (957911840)
			660 mm	23		**SL2-34-0660-E** (957911850)
			690 mm	24		**SL2-34-0690-E** (957911860)
			720 mm	25		**SL2-34-0720-E** (957911870)
			750 mm	26		**SL2-34-0750-E** (957911880)
			780 mm	27	12 ms	**SL2-34-0780-E** (957911890)
			810 mm	28		**SL2-34-0810-E** (957911900)
			840 mm	29		**SL2-34-0840-E** (957911910)
			870 mm	30		**SL2-34-0870-E** (957911920)
			900 mm	31		**SL2-34-0900-E** (957911930)
			930 mm	32	13 ms	**SL2-34-0930-E** (957911940)
			960 mm	33		**SL2-34-0960-E** (957911950)
			990 mm	34		**SL2-34-0990-E** (957911960)
			1020 mm	35		**SL2-34-1020-E** (957911970)
			1050 mm	36	14 ms	**SL2-34-1050-E** (957911980)
			1080 mm	37		**SL2-34-1080-E** (957911990)
			1110 mm	38		**SL2-34-1110-E** (957912000)
			1140 mm	39		**SL2-34-1140-E** (957912010)
			1170 mm	40	15 ms	**SL2-34-1170-E** (957912020)
			1200 mm	41		**SL2-34-1200-E** (957912030)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger protection res. 14 mm	0.2 ... 6 m	150 mm	15	7 ms	**SL4-14-0150-E** (957910000)
			210 mm	21	8 ms	**SL4-14-0210-E** (957910010)
			270 mm	27		**SL4-14-0270-E** (957910020)
			300 mm	30		**SL4-14-0300-E** (957910030)
			330 mm	33	9 ms	**SL4-14-0330-E** (957910040)
			360 mm	36		**SL4-14-0360-E** (957910050)
			390 mm	39	10 ms	**SL4-14-0390-E** (957910060)
			420 mm	42		**SL4-14-0420-E** (957910070)
			450 mm	45		**SL4-14-0450-E** (957910080)
			480 mm	48		**SL4-14-0480-E** (957910090)
			510 mm	51	11 ms	**SL4-14-0510-E** (957910100)
			540 mm	54		**SL4-14-0540-E** (957910110)
			570 mm	57		**SL4-14-0570-E** (957910120)
			600 mm	60		**SL4-14-0600-E** (957910130)
			630 mm	63	12 ms	**SL4-14-0630-E** (957910140)
			660 mm	66		**SL4-14-0660-E** (957910150)
			690 mm	69	13 ms	**SL4-14-0690-E** (957910160)
			720 mm	72		**SL4-14-0720-E** (957910170)
			750 mm	75		**SL4-14-0750-E** (957910180)
			780 mm	78		**SL4-14-0780-E** (957910190)
			810 mm	81	14 ms	**SL4-14-0810-E** (957910200)
			840 mm	84		**SL4-14-0840-E** (957910210)
			870 mm	87		**SL4-14-0870-E** (957910220)
			900 mm	90		**SL4-14-0900-E** (957910230)
			930 mm	93	15 ms	**SL4-14-0930-E** (957910240)
			960 mm	96		**SL4-14-0960-E** (957910250)
			990 mm	99	16 ms	**SL4-14-0990-E** (957910260)
			1020 mm	102		**SL4-14-1020-E** (957910270)
			1050 mm	105		**SL4-14-1050-E** (957910280)
			1080 mm	108		**SL4-14-1080-E** (957910290)
			1110 mm	111	17 ms	**SL4-14-1110-E** (957910300)
			1140 mm	114		**SL4-14-1140-E** (957910310)
			1170 mm	117		**SL4-14-1170-E** (957910320)
			1200 mm	120		**SL4-14-1200-E** (957910330)

AVAILABLE MODELS

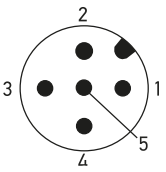
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Hand protection res. 24 mm	0.2 ... 6 m	150 mm	8	7 ms	**SL4-24-0150-E** (957910340)
			210 mm	11		**SL4-24-0210-E** (957910350)
			270 mm	14	8 ms	**SL4-24-0270-E** (957910360)
			300 mm	16		**SL4-24-0300-E** (957910370)
			330 mm	17		**SL4-24-0330-E** (957910380)
			360 mm	19		**SL4-24-0360-E** (957910390)
			390 mm	20		**SL4-24-0390-E** (957910400)
			420 mm	22	9 ms	**SL4-24-0420-E** (957910410)
			450 mm	24		**SL4-24-0450-E** (957910420)
			480 mm	25		**SL4-24-0480-E** (957910430)
			510 mm	27		**SL4-24-0510-E** (957910440)
			540 mm	28		**SL4-24-0540-E** (957910450)
			570 mm	30		**SL4-24-0570-E** (957910460)
			600 mm	32		**SL4-24-0600-E** (957910470)
			630 mm	33	10 ms	**SL4-24-0630-E** (957910480)
			660 mm	35		**SL4-24-0660-E** (957910490)
			690 mm	36		**SL4-24-0690-E** (957910500)
			720 mm	38		**SL4-24-0720-E** (957910510)
			750 mm	40		**SL4-24-0750-E** (957910520)
			780 mm	41		**SL4-24-0780-E** (957910530)
			810 mm	43	11 ms	**SL4-24-0810-E** (957910540)
			840 mm	44		**SL4-24-0840-E** (957910550)
			870 mm	46		**SL4-24-0870-E** (957910560)
			900 mm	48		**SL4-24-0900-E** (957910570)
			930 mm	49		**SL4-24-0930-E** (957910580)
			960 mm	51		**SL4-24-0960-E** (957910590)
			990 mm	52	12 ms	**SL4-24-0990-E** (957910600)
			1020 mm	54		**SL4-24-1020-E** (957910610)
			1050 mm	56		**SL4-24-1050-E** (957910620)
			1080 mm	57		**SL4-24-1080-E** (957910630)
			1110 mm	59		**SL4-24-1110-E** (957910640)
			1140 mm	60		**SL4-24-1140-E** (957910650)
			1170 mm	62	13 ms	**SL4-24-1170-E** (957910660)
			1200 mm	64		**SL4-24-1200-E** (957910670)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Hand protection res. 34 mm	0.2 ... 6 m	150 mm	6	7 ms	**SL4-34-0150-E** (957910680)
			210 mm	8		**SL4-34-0210-E** (957910690)
			270 mm	10	8 ms	**SL4-34-0270-E** (957910700)
			300 mm	11		**SL4-34-0300-E** (957910710)
			330 mm	12		**SL4-34-0330-E** (957910720)
			360 mm	13	9 ms	**SL4-34-0360-E** (957910730)
			390 mm	14		**SL4-34-0390-E** (957910740)
			420 mm	15		**SL4-34-0420-E** (957910750)
			450 mm	16		**SL4-34-0450-E** (957910760)
			480 mm	17	10 ms	**SL4-34-0480-E** (957910770)
			510 mm	18		**SL4-34-0510-E** (957910780)
			540 mm	19		**SL4-34-0540-E** (957910790)
			570 mm	20		**SL4-34-0570-E** (957910800)
			600 mm	21		**SL4-34-0600-E** (957910810)
			630 mm	22	11 ms	**SL4-34-0630-E** (957910820)
			660 mm	23		**SL4-34-0660-E** (957910830)
			690 mm	24		**SL4-34-0690-E** (957910840)
			720 mm	25		**SL4-34-0720-E** (957910850)
			750 mm	26		**SL4-34-0750-E** (957910860)
			780 mm	27	12 ms	**SL4-34-0780-E** (957910870)
			810 mm	28		**SL4-34-0810-E** (957910880)
			840 mm	29		**SL4-34-0840-E** (957910890)
			870 mm	30		**SL4-34-0870-E** (957910900)
			900 mm	31		**SL4-34-0900-E** (957910910)
			930 mm	32	13 ms	**SL4-34-0930-E** (957910920)
			960 mm	33		**SL4-34-0960-E** (957910930)
			990 mm	34		**SL4-34-0990-E** (957910940)
			1020 mm	35		**SL4-34-1020-E** (957910950)
			1050 mm	36	14 ms	**SL4-34-1050-E** (957910960)
			1080 mm	37		**SL4-34-1080-E** (957910970)
			1110 mm	38		**SL4-34-1110-E** (957910980)
			1140 mm	39		**SL4-34-1140-E** (957910990)
			1170 mm	40	15 ms	**SL4-34-1170-E** (957911000)
			1200 mm	41		**SL4-34-1200-E** (957911010)

CONNECTIONS

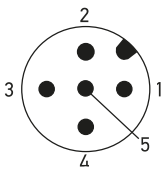
SL*--****-E (Receiver)**



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	OSSD1
3	Blue	0 V
4	Black	OSSD2
5	Gray	EDM FEEDBACK/SELEC-TION

SL*--****-E (Emitter)**

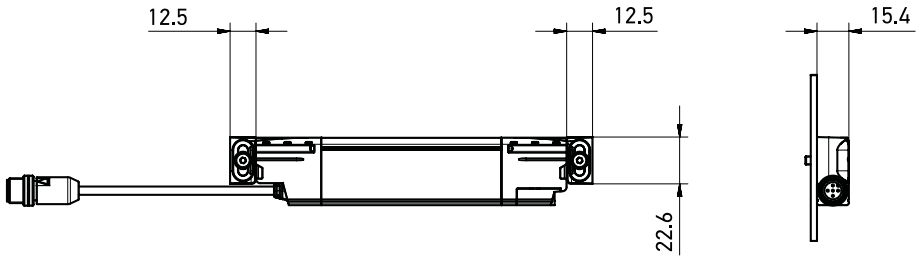


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	RESTART SELECTION
3	Blue	0 V
4	Black	NOT USED
5	Gray	RESTART

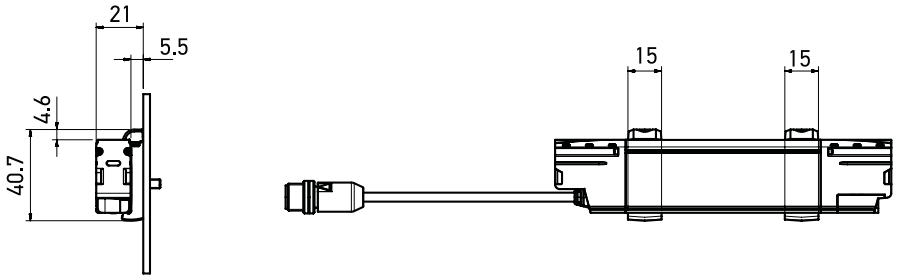
MECHANICAL DRAWINGS

SL*--****-E Slim Overall dimension using O brackets**



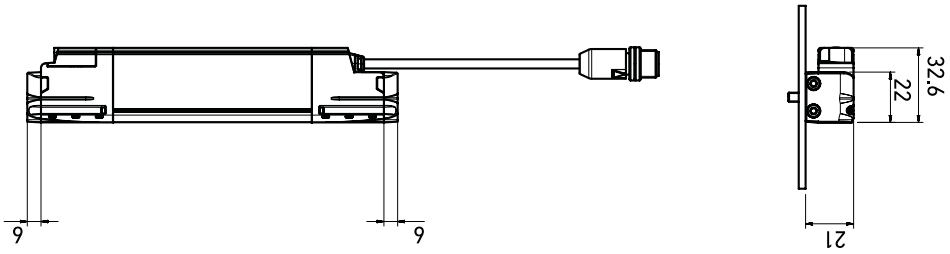
(mm)

SL*--****-E Slim Overall dimension using C brackets**



(mm)

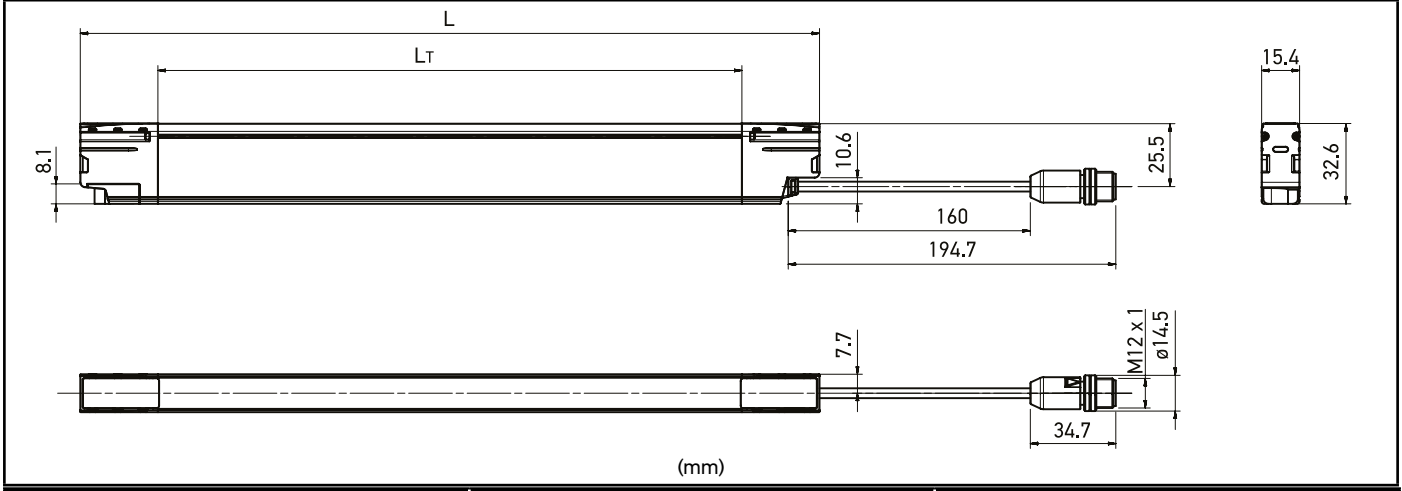
SL*--****-E Slim Overall dimension using L brackets**



(mm)

MECHANICAL DRAWINGS

SL*--****-E**

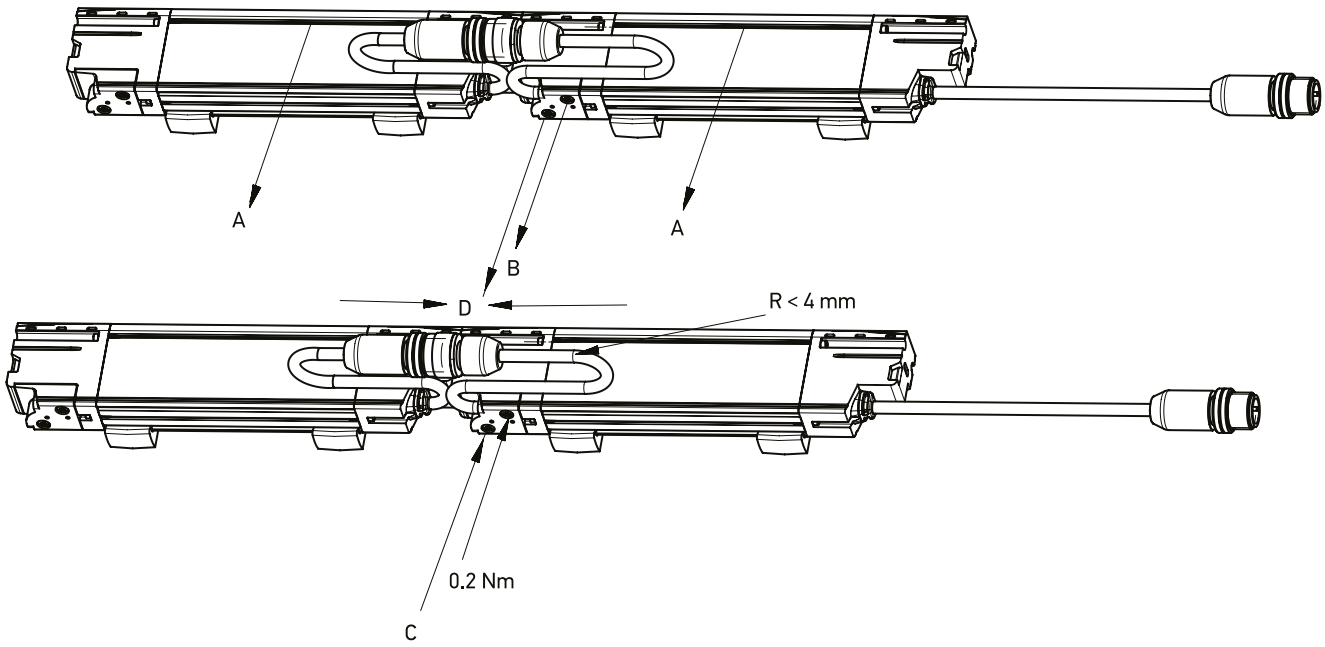


(mm)

Model	L (mm)	LT (mm)
SL*-**-0150-E	150	87
SL*-**-0210-E	210	147
SL*-**-0270-E	270	207
SL*-**-0300-E	300	237
SL*-**-0330-E	330	267
SL*-**-0360-E	360	297
SL*-**-0390-E	390	327
SL*-**-0420-E	420	357
SL*-**-0450-E	450	387
SL*-**-0480-E	480	417
SL*-**-0510-E	510	447
SL*-**-0540-E	540	477
SL*-**-0570-E	570	507
SL*-**-0600-E	600	537
SL*-**-0630-E	630	567
SL*-**-0660-E	660	597
SL*-**-0690-E	690	627
SL*-**-0720-E	720	657
SL*-**-0750-E	750	687
SL*-**-0780-E	780	717
SL*-**-0810-E	810	747
SL*-**-0840-E	840	777
SL*-**-0870-E	870	807
SL*-**-0900-E	900	837
SL*-**-0930-E	930	867
SL*-**-0960-E	960	897
SL*-**-0990-E	990	927
SL*-**-1020-E	1020	957
SL*-**-1050-E	1050	987
SL*-**-1080-E	1080	1017
SL*-**-1110-E	1110	1047
SL*-**-1140-E	1140	1077
SL*-**-1170-E	1170	1107
SL*-**-1200-E	1200	1137

MECHANICAL DRAWINGS

SL*--****-E Cascade units**



(mm)

Models	A	B	C	D
SL*/**-****-E	To connect cascade units, fix all cascade units with proper brackets.	Remove Terminator Caps at the end of Master by loosening the two fixing screws for both emitter and receiver.	Fasten the cascade cables in place of removed terminator caps, ensure all cables bend radius it's not less than 4 mm.	Connect Slaves M12 male connectors to M12 Female connectors from cascade cables.

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-H1-03-B-001	Cascade cable for SLIM 0.1m	95A252950
	CS-H1-03-B-005	Cascade cable for SLIM 0.5m	95ASE2550
	CS-H1-03-B-01	Cascade cable for SLIM 1m	95ASE2560
Mounting brackets	ST-K2-SL-C	C-shaped Brackets 2 pcs kit for SLIM	95ASE2510
	ST-K2-SL-C-OR	C-shaped Orientable Brackets 2 pcs kit for SLIM	95ASE2530
	ST-K2-SL-L	L-shaped Brackets 2 pcs kit for SLIM	95ASE2540
	ST-K4-SL-O	O-shaped Brackets 4 pcs kit for SLIM	95ASE2520
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Test pieces	TP-14	Safety light curtains test piece ø 14 mm	95ACC1630
	TP-24	Safety light curtains test piece ø 24 mm	95ASE2570
	TP-34	Safety light curtains test piece ø 34 mm	95ASE2580

NOTE 1: In SLIM package are already included C-shaped brackets (ST-K2-SL-C) and O-shaped brackets (ST-K4-SL-O).
NOTE 2: When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges

WEBSITE

SG4 Base

TYPE 4 SAFETY LIGHT CURTAIN WITH BASIC FUNCTIONALITY



Type 4 finger and hand resolution light curtain for access and presence detection in dangerous machinery that require basic functions like manual restart and external device monitoring.

- High reliability
- Easy installation and alignment
- Cost effective finger, hand detection with basic functions

- Up to 19 m operating distance
- Compact dimensions (32.3 x 36.9 mm section)
- Anti-interfence coding
- IP65 Protection; IP69K with optional tube
- Unshielded cables
- Rotating and anti-vibration brackets

CODE DESCRIPTION

SG 4 - 14 - 015 - 00 - E

serie	**SG**	SG4 Base
type	**4**	Type 4
detection capability	**14**	Finger: 14 mm
	30	Hand: 30 mm
monitored height	**015**	150 mm
	030	300 mm
	...	
	180	1800 mm
output	**00**	
functionality	**X**	Basic (automatic restart)
	E	Standard (auto/manual restart, EDM)

(*) IP69K with optional tube

TECHNICAL SPECIFICATIONS

	SG4-14-***-00-E	SG4-14-***-00-X	SG4-30-***-00-E	SG4-30-***-00-X
	SAFETY TYPE 4		SAFETY TYPE 4	
GENERAL DATA				
Operating principle	Emitter + Receiver			
Detection capability	14 mm		30 mm	
MONITORED AREA				
Nominal sensing distance	0.2 ... 6 m		0.2 ... 19 m	
Controlled height	150 ... 1800 mm			
EMISSION DATA				
Emission	Infrared LED (850nm)			
Effective beam angle	≤ ±2.5 °			
FUNCTIONS				
Available functions	Manual/Automatic Restart, EDM	Automatic Restart	Manual/Automatic Restart, EDM	Automatic Restart
SAFETY PARAMETERS				
Type	4			
PI	e			
SIL	SIL 3 (IEC 61508)			
INPUT/OUTPUT				
Output type	2 x PNP (OSSD safety output) with EDM	2 x PNP (OSSD safety output)	2 x PNP (OSSD safety output) with EDM	2 x PNP (OSSD safety output)
ELECTRICAL DATA				
Supply voltage	24 Vdc ±20%			
Power consumption - Emitter	≤ 2.5 W			
Power consumption - Receiver	≤ 3.5 W without load			
Maximum DC load current	500 mA each output			
MECHANICAL DATA				
Dimensions	32.3 x 36.9 x (150 ... 1800) mm			
Material	Painted aluminum / PMMA / PC MAKROLON			
Connections	M12-4 poles (emitter) M12-8 poles (receiver)	M12-4 poles (emitter) M12-5 poles (receiver)	M12-4 poles (emitter) M12-8 poles (receiver)	M12-4 poles (emitter) M12-5 poles (receiver)
Length of cables (Power)	≤ 50 m			
CERTIFICATIONS				
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)			
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)			
Electromagnetic compatibility	IEC EN 60947-5-2			
ENVIRONMENTAL DATA				
Operating Temperature	0 ... 55 °C			
Storage temperature max.	-25 ... 70 °C			
Mechanical Protection	IP65			
Humidity	15 ... 95 % no condensation			
Ambient light immunity	According to IEC 61496-2			

AVAILABLE MODELS

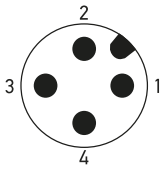
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger protection res. 14 mm	0.2 ... 6 m	150 mm	16	11 ms	**SG4-14-015-00-E** (957901000)
						SG4-14-015-00-X (957901460)
			300 mm	32	15 ms	**SG4-14-030-00-E** (957901010)
						SG4-14-030-00-X (957901470)
			450 mm	48	18 ms	**SG4-14-045-00-E** (957901020)
						SG4-14-045-00-X (957901480)
			600 mm	64	22 ms	**SG4-14-060-00-E** (957901030)
						SG4-14-060-00-X (957901490)
			750 mm	80	25 ms	**SG4-14-075-00-E** (957901040)
						SG4-14-075-00-X (957901500)
			900 mm	96	29 ms	**SG4-14-090-00-E** (957901050)
						SG4-14-090-00-X (957901510)
			1050 mm	112	33 ms	**SG4-14-105-00-E** (957901060)
						SG4-14-105-00-X (957901520)
			1200 mm	128	36 ms	**SG4-14-120-00-E** (957901070)
						SG4-14-120-00-X (957901530)
			1350 mm	144	40 ms	**SG4-14-135-00-E** (957901080)
						SG4-14-135-00-X (957901540)
			1500 mm	160	43 ms	**SG4-14-150-00-E** (957901090)
						SG4-14-150-00-X (957901550)
			1650 mm	176	47 ms	**SG4-14-165-00-E** (957901100)
						SG4-14-165-00-X (957901560)
			1800 mm	192	50 ms	**SG4-14-180-00-E** (957901110)
						SG4-14-180-00-X (957901570)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Hand protection res. 30 mm	0.2 ... 19 m	150 mm	8	9 ms	**SG4-30-015-00-E** (957901120)
				96		**SG4-30-015-00-X** (957901690)
			300 mm	16	11 ms	**SG4-30-030-00-E** (957901130)
				8		**SG4-30-030-00-X** (957901580)
			450 mm	24	13 ms	**SG4-30-045-00-E** (957901140)
				16		**SG4-30-045-00-X** (957901590)
			600 mm	24	14 ms	**SG4-30-060-00-X** (957901600)
				32		**SG4-30-060-00-E** (957901150)
			750 mm	40	16 ms	**SG4-30-075-00-E** (957901160)
				32		**SG4-30-075-00-X** (957901610)
			900 mm	48	18 ms	**SG4-30-090-00-E** (957901170)
				40		**SG4-30-090-00-X** (957901620)
			1050 mm	56	19 ms	**SG4-30-105-00-E** (957901180)
				48		**SG4-30-105-00-X** (957901630)
			1200 mm	64	21 ms	**SG4-30-120-00-E** (957901190)
				56		**SG4-30-120-00-X** (957901640)
			1350 mm	64	23 ms	**SG4-30-135-00-X** (957901650)
				72		**SG4-30-135-00-E** (957901200)
			1500 mm	80	25 ms	**SG4-30-150-00-E** (957901210)
				72		**SG4-30-150-00-X** (957901660)
			1650 mm	88	26 ms	**SG4-30-165-00-E** (957901220)
				80		**SG4-30-165-00-X** (957901670)
			1800 mm	88	28 ms	**SG4-30-180-00-X** (957901680)
				96		**SG4-30-180-00-E** (957901230)

CONNECTIONS

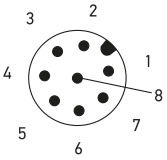
SG4-**-***-00-E (Emitter)



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	24V TEST (N.O.)
3	Blue	0 V
4	Black	NOT USED

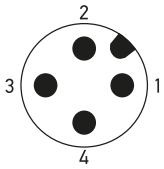
SG4-**-***-00-E (Receiver)



MALE
M12
8 pins

1	White	RESET/RESTART
2	Brown	24 Vdc
3	Green	EDM SELECTION
4	Yellow	EDM INPUT
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0 V
8	Red	MAN/AUTO SELECTION

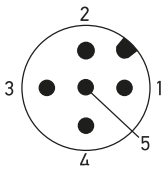
SG4-**-***-00-X (Emitter)



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED

SG4-**-***-00-X (Receiver)

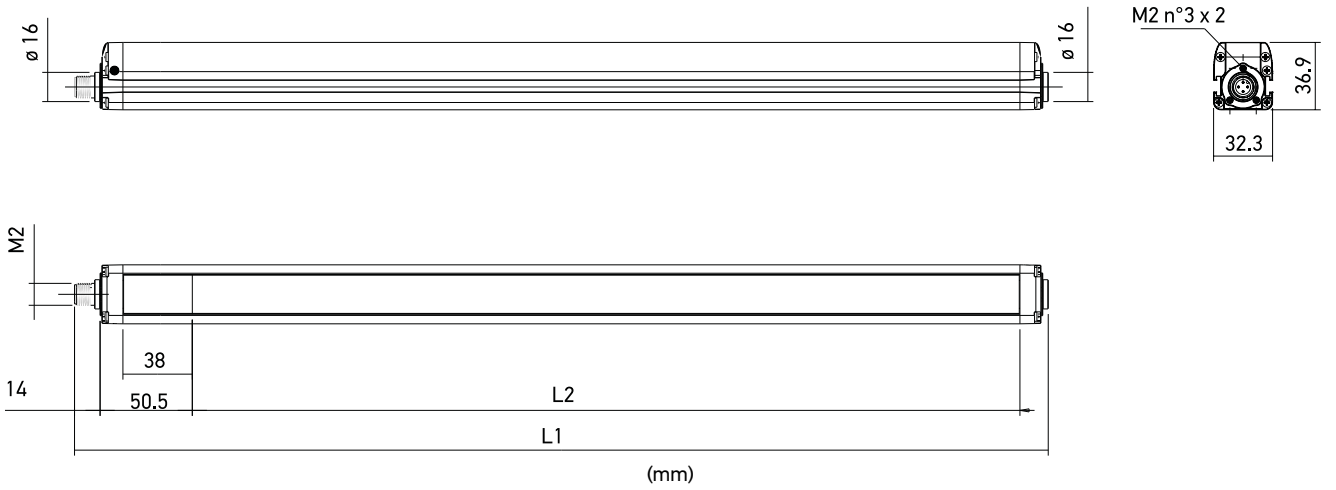


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	OSSD1
3	Blue	0 V
4	Black	OSSD2
5	Gray	NOT USED

MECHANICAL DRAWINGS

SG4--***-00-***



(mm)

Models	L1 (mm)	L2 (mm)
SG4-**-015-00-***	233.3	153.3
SG4-**-030-00-***	383.2	303.2
SG4-**-045-00-***	533.2	453.3
SG4-**-060-00-***	683.2	603.2
SG4-**-075-00-***	833.2	753.3
SG4-**-090-00-***	983.2	903.2
SG4-**-105-00-***	1133.2	1053.2
SG4-**-120-00-***	1283.2	1203.3
SG4-**-135-00-***	1433.2	1253.2
SG4-**-150-00-***	1583.2	1503.3
SG4-**-165-00-***	1733.3	1653.3
SG4-**-180-00-***	1883.3	1803.3

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-02-U-03	Cable M12 4 poles axial female unshielded 3m UL 2464	95ASE1120
	CS-A1-02-U-05	Cable M12 4 poles axial female unshielded 5m UL 2464	95ASE1130
	CS-A1-02-U-10	Cable M12 4 poles axial female unshielded 10m UL 2464	95ASE1140
	CS-A1-02-U-15	Cable M12 4 poles axial female unshielded 15m UL 2464	95ASE1150
	CS-A1-02-U-25	Cable M12 4 poles axial female unshielded 25m UL 2464	95ASE1160
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
IP69K protections	SG-IP69K-1200	IP69K protection tubes for SG BASE h=1200mm	95ASE1360
	SG-IP69K-1350	IP69K protection tubes for SG BASE h=1350mm	95ASE1370
	SG-IP69K-1500	IP69K protection tubes for SG BASE h=1500mm	95ASE1380
	SG-IP69K-1650	IP69K protection tubes for SG BASE h=1650mm	95ASE1390
	SG-IP69K-1800	IP69K protection tubes for SG BASE h=1800mm	95ASE1400
	SG-IP69K-150	IP69K protection tubes for SG BASE h=150mm	95ASE1290
	SG-IP69K-300	IP69K protection tubes for SG BASE h=300mm	95ASE1300
	SG-IP69K-450	IP69K protection tubes for SG BASE h=450mm	95ASE1310
	SG-IP69K-600	IP69K protection tubes for SG BASE h=600mm	95ASE1320
	SG-IP69K-750	IP69K protection tubes for SG BASE h=750mm	95ASE1330
	SG-IP69K-900	IP69K protection tubes for SG BASE h=900mm	95ASE1340
	SG-IP69K-1050	IP69K protection tubes for SG BASE h=1050mm	95ASE1350
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mirrors brackets	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-KSTD (30 pcs)	Metal angled brackets Box 30 x 4 pcs	95ASE2800
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K4AV (30 pcs)	Anti vibration supports Box 30 x 4 pcs	95ASE2770
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110

ACCESSORIES

	Model	Description	Article code
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-KSTD (30 pcs)	Metal angled brackets Box 30 x 4 pcs	95ASE2800
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K4AV (30 pcs)	Anti vibration supports Box 30 x 4 pcs	95ASE2770
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
Protective stands	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

DATASENSING
easing automation challenges

WEBSITE

SG4-N

TYPE 4 SAFETY LIGHT CURTAIN WITH INTEGRATED MUTING FUNCTION



Safety light curtain with finger or hand resolution, integrated muting, retro compatible with SE series.

- No dead zone
- Pigtail cable with M12 connector
- Up to 20 m operating range and 1800 mm protected height
- Compact dimensions (35 x 41 mm section)
- Anti-interference coding
- Integrated Muting function
- Configurable with Push buttons for common configuration

CODE DESCRIPTION

SG 4 - 14 - 030 - 00 - N

serie	**SG**	SG4-N
type	**4**	Type 4
resolution	**14**	Finger: 14 mm
	30	Hand: 30 mm
monitored height	**030**	300 mm
	045	450 mm
	...	
	180	1800 mm
Outputs	**00**	
functionality	**N**	Integrated Muting, single M12 connector, configurable with DIP switches

TECHNICAL SPECIFICATIONS

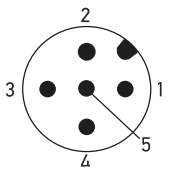
	SG4-14-***-00-N	SG4-30-***-00-N
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.2 ... 7 m	0.2 ... 20 m
Controlled height	300 ... 1800 mm	
EMISSION DATA		
Emission	Infrared LED (950nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM, L/T Muting, Partial Muting, Override, Range Reduction (on TX)	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP (OSSD safety output) with EDM	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3 W	
Power consumption - Receiver	≤ 5 W without load	
Maximum DC load current	500 mA each output	
MECHANICAL DATA		
Dimensions	35 x 40.75 x (300 ... 1800) mm	
Material	Painted aluminum / PMMA / PBT Valox 508 / PC LEXAN	
Connections	M12-5 poles pig-tail (emitter) M12-8 poles pig-tail (receiver)	
Length of cables (Power)	≤ 50 m	
CERTIFICATIONS		
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)	
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)	
Electromagnetic compatibility	IEC EN 60947-5-2	
ENVIRONMENTAL DATA		
Operating Temperature	0 ... 50 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP65	
Humidity	15 ... 95 % no condensation	
Ambient light immunity	According to IEC 61496-2	

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger prot. res. 14 muting mm	0.2 ... 7 m	300 mm	32	15 ms	**SG4-14-030-00-N** (957902350)
			450 mm	48	17 ms	**SG4-14-045-00-N** (957902360)
			600 mm	64	19 ms	**SG4-14-060-00-N** (957902370)
			750 mm	80	20 ms	**SG4-14-075-00-N** (957902380)
			900 mm	96	22 ms	**SG4-14-090-00-N** (957902390)
			1050 mm	112	24 ms	**SG4-14-105-00-N** (957902400)
			1200 mm	128	26 ms	**SG4-14-120-00-N** (957902410)
			1350 mm	144	27 ms	**SG4-14-135-00-N** (957902420)
			1500 mm	160	29 ms	**SG4-14-150-00-N** (957902430)
			1650 mm	176	31 ms	**SG4-14-165-00-N** (957902440)
			1800 mm	192	33 ms	**SG4-14-180-00-N** (957902450)
	Hand prot. res. 30 muting mm	0.2 ... 20 m	300 mm	16	13 ms	**SG4-30-030-00-N** (957902460)
			450 mm	24	14 ms	**SG4-30-045-00-N** (957902470)
			600 mm	32	15 ms	**SG4-30-060-00-N** (957902480)
			750 mm	40	16 ms	**SG4-30-075-00-N** (957902490)
			900 mm	48	17 ms	**SG4-30-090-00-N** (957902500)
			1050 mm	56	18 ms	**SG4-30-105-00-N** (957902510)
			1200 mm	64	19 ms	**SG4-30-120-00-N** (957902520)
			1350 mm	72		**SG4-30-135-00-N** (957902530)
			1500 mm	80	20 ms	**SG4-30-150-00-N** (957902540)
			1650 mm	88	21 ms	**SG4-30-165-00-N** (957902550)
			1800 mm	96	22 ms	**SG4-30-180-00-N** (957902560)

CONNECTIONS

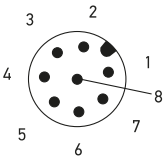
SG4--***-00-N**
(Emitter)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	EARTH
5	Gray	RANGE REDUCTION

SG4--***-00-N**
(Receiver)

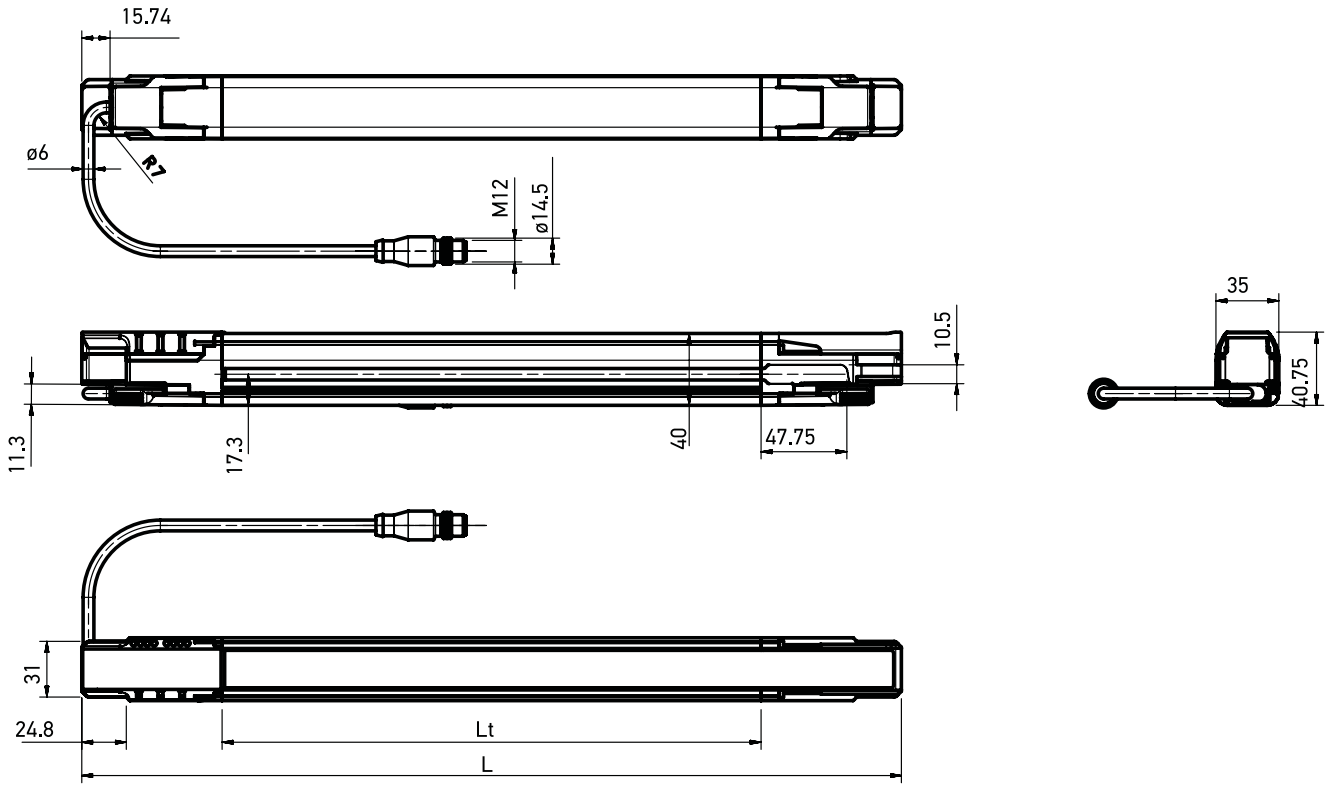


MALE
M12
8 pins

1	White	RESTART/RESET/EDM/ OVERRIDE
2	Brown	24Vdc
3	Green	MUTING1
4	Yellow	MUTING2
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	MUTING LAMP

MECHANICAL DRAWINGS

SG4--***-00-N**



(mm)

Model	L (mm)	Lt (mm)
SG4-**-030-**-*	306.3	150
SG4-**-045-**-*	456.3	300
SG4-**-060-**-*	606.3	450
SG4-**-075-**-*	756.3	600
SG4-**-090-**-*	906.3	750
SG4-**-105-**-*	1056.3	900
SG4-**-120-**-*	1206.3	1050
SG4-**-135-**-*	1356.3	1200
SG4-**-150-**-*	1506.3	1350
SG4-**-165-**-*	1656.3	1500
SG4-**-180-**-*	1806.3	1650

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CS-A1-06-U-50	Cable M12 8 poles axial female unshielded 50m UL 2464	95A252710
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mirrors brackets	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-KSTD (30 pcs)	Metal angled brackets Box 30 x 4 pcs	95ASE2800
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K4AV (30 pcs)	Anti vibration supports Box 30 x 4 pcs	95ASE2770
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
Muting lamps	LMS-1	Modular muting lamp	95ACC1990
	LMS-2	Muting lamp horizontal fixing	95ACC2000
	LMS-3	Muting lamp vertical fixing	95ACC2010
	LMS	Muting lamp	95ASE1830
Protective stands	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges

WEBSITE

SG4 Extended

TYPE 4 SAFETY LIGHT CURTAIN WITH ADVANCED FUNCTIONALITY



Type 4 Finger and hand resolution safety light curtain with possibility of configuration of advanced functions through pushbuttons or Graphic User Interface.

- No dead zone
- Pigtail cable with M12 connector
- Cascade connection of up to 3 units
- Up to 20 m operating range and 1800 m protected height
- Compact dimensions (35 x 41 mm section)
- Anti-interference coding
- Integrated Muting function
- Floating Blanking, Fixed Blanking and Reduced Resolution
- Configurable with: Pushbuttons for common configuration
- Graphic User Interface for complete parametrization
- Ethernet Interface for programming, monitoring and error logging

CODE DESCRIPTION

SG 4 - 14 - 030 - 00 - P

serie	**SG**	SG4 Extended
type	**4**	Type 4
resolution	**14**	Finger: 14 mm
	30	Hand: 30 mm
monitored height	**030**	300 mm
	045	450 mm
	...	
	180	1800 mm
output	**00**	
version	**P**	Cascadable, Advanced Configuration Mode, Programmable with GUI

TECHNICAL SPECIFICATIONS

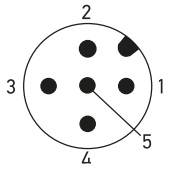
	SG4-14-***-00-P	SG4-30-***-00-P
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.2 ... 7 m	0.2 ... 20 m
Controlled height	300 ... 1800 mm	
EMISSION DATA		
Emission	Infrared LED (950nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM, L/T Muting, Partial Muting, Override, Blanking, Programmability	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP (OSSD safety output) with EDM	
COMMUNICATION		
Network Interface	10/100 Mbit/s Ethernet	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3 W	
Power consumption - Receiver	≤ 5 W without load	
Maximum DC load current	500 mA each output	
	Tcascade [ms] = Tmaster + Tslave1 + 7.5	
	Tcascade [ms] = Tmaster + Tslave1 + Tslave2 + 7.5	
MECHANICAL DATA		
Dimensions	306.3 (300 ... 1800) mm	
Material	Painted aluminum / PMMA / PBT Valox 508 / PC LEXAN	
Connections	M12-5 poles pig-tail (emitter) M12-12 poles + M12-5poles / M12-12 poles pig-tails (receiver)	
Length of cables (Power)	≤ 50 m	
CERTIFICATIONS		
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)	
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)	
Electromagnetic compatibility	IEC EN 60947-5-2	
ENVIRONMENTAL DATA		
Operating Temperature	0 ... 50 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP65	
Humidity	15 ... 95 % no condensation	
Ambient light immunity	According to IEC 61496-2	

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger prot. res. 14 programmable mm	0.2 ... 7 m	300 mm	32	15 ms	**SG4-14-030-00-P** (957901240)
			450 mm	48	17 ms	**SG4-14-045-00-P** (957901250)
			600 mm	64	19 ms	**SG4-14-060-00-P** (957901260)
			750 mm	80	20 ms	**SG4-14-075-00-P** (957901270)
			900 mm	96	22 ms	**SG4-14-090-00-P** (957901280)
			1050 mm	112	24 ms	**SG4-14-105-00-P** (957901290)
			1200 mm	128	26 ms	**SG4-14-120-00-P** (957901300)
			1350 mm	144	27 ms	**SG4-14-135-00-P** (957901310)
			1500 mm	160	29 ms	**SG4-14-150-00-P** (957901320)
			1650 mm	176	31 ms	**SG4-14-165-00-P** (957901330)
			1800 mm	192	33 ms	**SG4-14-180-00-P** (957901340)
	Hand prot. res. 30 programmable mm	0.2 ... 20 m	300 mm	16	13 ms	**SG4-30-030-00-P** (957901350)
			450 mm	24	14 ms	**SG4-30-045-00-P** (957901360)
			600 mm	32	15 ms	**SG4-30-060-00-P** (957901370)
			750 mm	40	16 ms	**SG4-30-075-00-P** (957901380)
			900 mm	48	17 ms	**SG4-30-090-00-P** (957901390)
			1050 mm	56	18 ms	**SG4-30-105-00-P** (957901400)
			1200 mm	64	19 ms	**SG4-30-120-00-P** (957901410)
			1350 mm	72		**SG4-30-135-00-P** (957901420)
			1500 mm	80	20 ms	**SG4-30-150-00-P** (957901430)
			1650 mm	88	21 ms	**SG4-30-165-00-P** (957901440)
			1800 mm	96		**SG4-30-180-00-P** (957901450)

CONNECTIONS

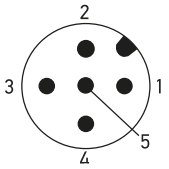
SG4-**-***-00-P (Emitter)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	EARTH
5	Gray	RANGE REDUCTION

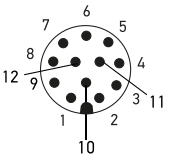
SG4-**-***-00-P (Receiver)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	NOT USED

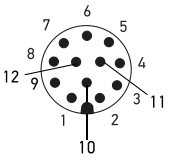
SG4-**-***-00-P (Receiver)



MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	RESET/RESTART/ALIGN
4	Green	TEACH IN
5	Pink	OSSD2
6	Yellow	EDM
7	Black	NOT USED
8	Gray	OSSD1
9	Red	TOLERANCE
10	Violet	LAMP OUTPUT
11	Gray /Pink	NOT USED
12	Red/ Blue	EARTH

SG4-**-***-00-P (Receiver)

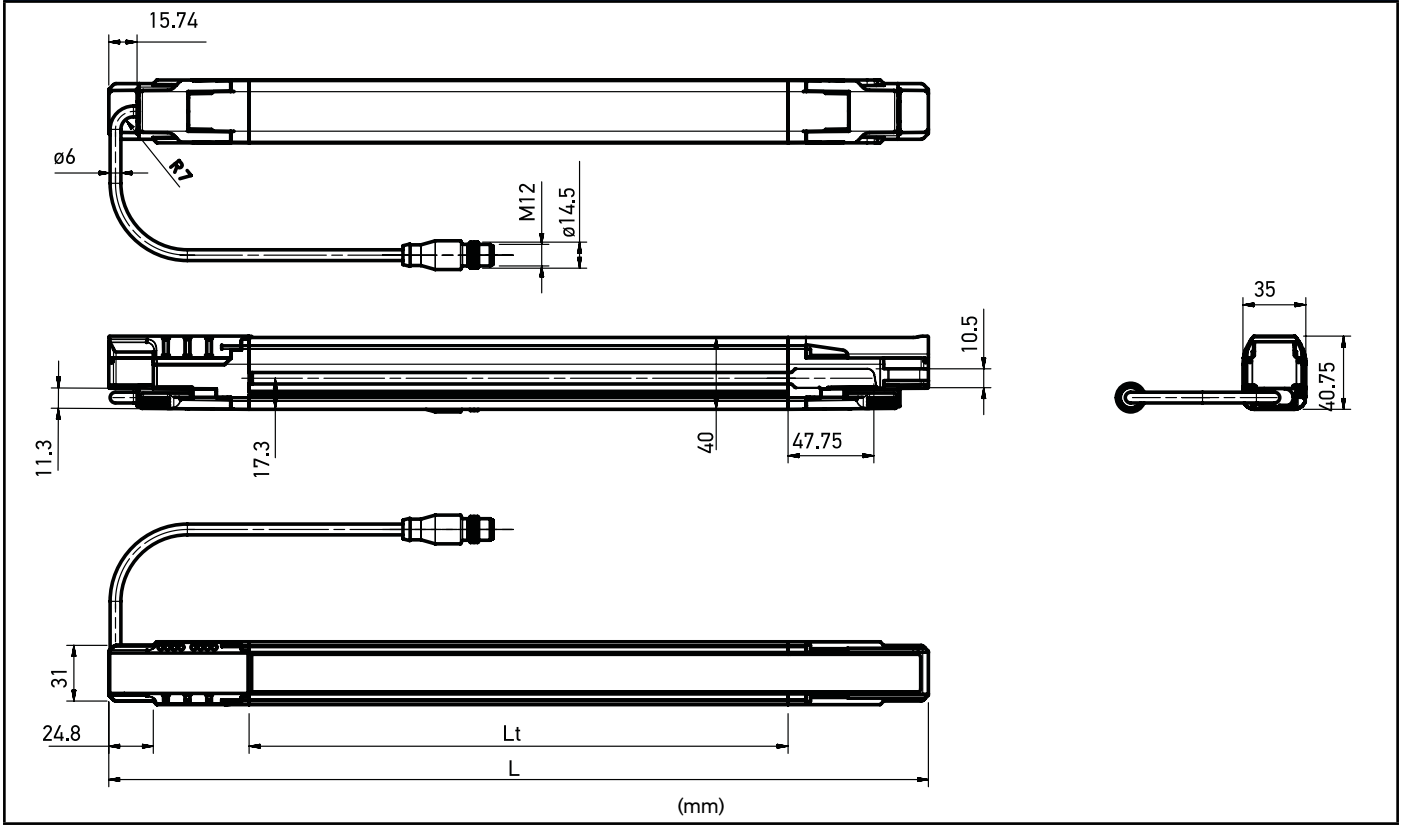


MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	RESET/RESTART/ALIGN
4	Green	OVERRIDE1
5	Pink	OSSD2
6	Yellow	EDM
7	Black	MUTING DISABLE
8	Gray	OSSD1
9	Red	OVERRIDE2
10	Violet	LAMP OUTPUT
11	Gray /Pink	OVERRIDE STATUS
12	Red/ Blue	EARTH

MECHANICAL DRAWINGS

SG4--***-00-P**



ACCESSORIES

	Model	Description	Article code
Cables	CAB-ETH-M01	M12-RJ45 IP67 ethernet cable 1m	93A051346
	CS-G1-70-B-002	Pigtail cable for SG4 EXTENDED receiver blanking function M12 12p male connector 0.2m	95A252830
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CS-A1-10-U-03	Cable M12 12 poles axial female unshielded 3m UL 2464	95A252720
	CS-A1-10-U-05	Cable M12 12 poles axial female unshielded 5m UL 2464	95A252730
	CS-A1-10-U-10	Cable M12 12 poles axial female unshielded 10m UL 2464	95A252740
	CS-A1-10-U-25	Cable M12 12 poles axial female unshielded 25m UL 2464	95A252760
	CS-A1-10-U-15	Cable M12 12 poles axial female unshielded 15m UL 2464	95A252750
	CS-A1-10-U-50	Cable M12 12 poles axial female unshielded 50m UL 2464	95A252770
	CS-F1-80-B-01	Cascade cable for SG4 EXTENDED 1m	95A252840
	CS-F1-80-B-005	Cascade cable for SG4 EXTENDED 0.5m	95A252850
	CS-F1-80-B-0005	Cascade cable for SG4 EXTENDED 0.05m	95A252860
	CAB-ETH-M03	M12-RJ45 IP67 ethernet cable 3m	93A051347
	CAB-ETH-M05	M12-RJ45 IP67 ethernet cable 5m	93A051348

ACCESSORIES

	Model	Description	Article code
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mirrors brackets	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
Muting lamps	LMS-1	Modular muting lamp	95ACC1990
	LMS-2	Muting lamp horizontal fixing	95ACC2000
	LMS-3	Muting lamp vertical fixing	95ACC2010
	LMS	Muting lamp	95ASE1830
Protective stands	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges

IP69K

AISI316L

WEBSITE

SG4-H

IP69K STAINLESS STEEL SAFETY LIGHT CURTAIN FOR PHARMA



Finger protection in applications where high hygienic requirements need frequent cleanings with higly corrosive detergents. The first safety light curtain with stainless steel housing and glass.

- Stainless steel housing
- Hygienic design
- No need for additional protection tubesl
- P69K full protection

- Housing: AISI316L stainless steel with roughness under 0.8 micron
- Window: Optical glass
- Rounded surfaces with no gaps or sharp edges
- No labels: All information laser marked
- Maximum safety: Type 4, finger resolution
- Three protection heights: 150, 300 and 450 mm
- 50 x 30 mm profile
- 4 LEDs and 7-segment display alignment aiding

SAFETY TYPE 4

CODE DESCRIPTION

SG 4 H - 14 - 015 - 00 - X - G

series	**SG**	IP69K Stainless steel type 4 safety light curtain for pharma industry
type	**4**	Type 4
resolution	**14**	Finger: 14 mm
monitored height	**015**	150 mm
	030	300 mm
	045	450 mm
functional version	**X**	Only Auto-restart no EDM
mechanical version	**B**	Mechanical fixing only at bottom
	G	Top-bottom fixing

TECHNICAL SPECIFICATIONS

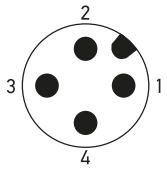
	SG4-H14-***-00-X-*
	SAFETY TYPE 4
GENERAL DATA	
Operating principle	Emitter + Receiver
Detection capability	14 mm
MONITORED AREA	
Nominal sensing distance	0.2 ... 6 m
Controlled height	150 ... 450 mm
EMISSION DATA	
Emission	Infrared LED (850nm)
Effective beam angle	≤ ±2.5 °
FUNCTIONS	
Available functions	Automatic Restart, IP69K Hygienic Design
SAFETY PARAMETERS	
Type	4
Pl	e
SIL	SIL 3 (IEC 61508)
INPUT/OUTPUT	
Output type	2 x PNP (OSSD safety output)
ELECTRICAL DATA	
Supply voltage	24 Vdc ±20%
Power consumption - Emitter	≤ 2.5 W
Power consumption - Receiver	≤ 3.5 W without load
Maximum DC load current	500 mA each output
MECHANICAL DATA	
Dimensions	33 x 53 x (150 ... 450) mm
Material	Stainless steel AISI 316L / Glass
Connections	M12-4 poles (emitter) M12-5 poles (receiver)
Length of cables (Power)	≤ 50 m
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
Electromagnetic compatibility	IEC EN 60947-5-2
ENVIRONMENTAL DATA	
Operating Temperature	-10 ... 55 °C
Storage temperature max.	-25 ... 70 °C
Mechanical Protection	IP65 / IP69K
Humidity	15 ... 95 % no condensation
Ambient light immunity	According to IEC 61496-2

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger protection res. 14 mm	0.2 ... 6 m	150 mm	16	11 ms	**SG4-H14-015-00-X-B** (957901760)
						SG4-H14-015-00-X-G (957902330)
			300 mm	32	15 ms	**SG4-H14-030-00-X-G** (957901720)
						SG4-H14-030-00-X-B (957901700)
			450 mm	48	18 ms	**SG4-H14-045-00-X-B** (957901710)
						SG4-H14-045-00-X-G (957901730)

CONNECTIONS

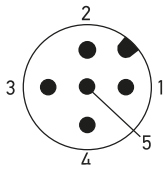
SG4-H14-0-*-* (Emitter)**



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED

SG4-H14-0-*-* (Receiver)**

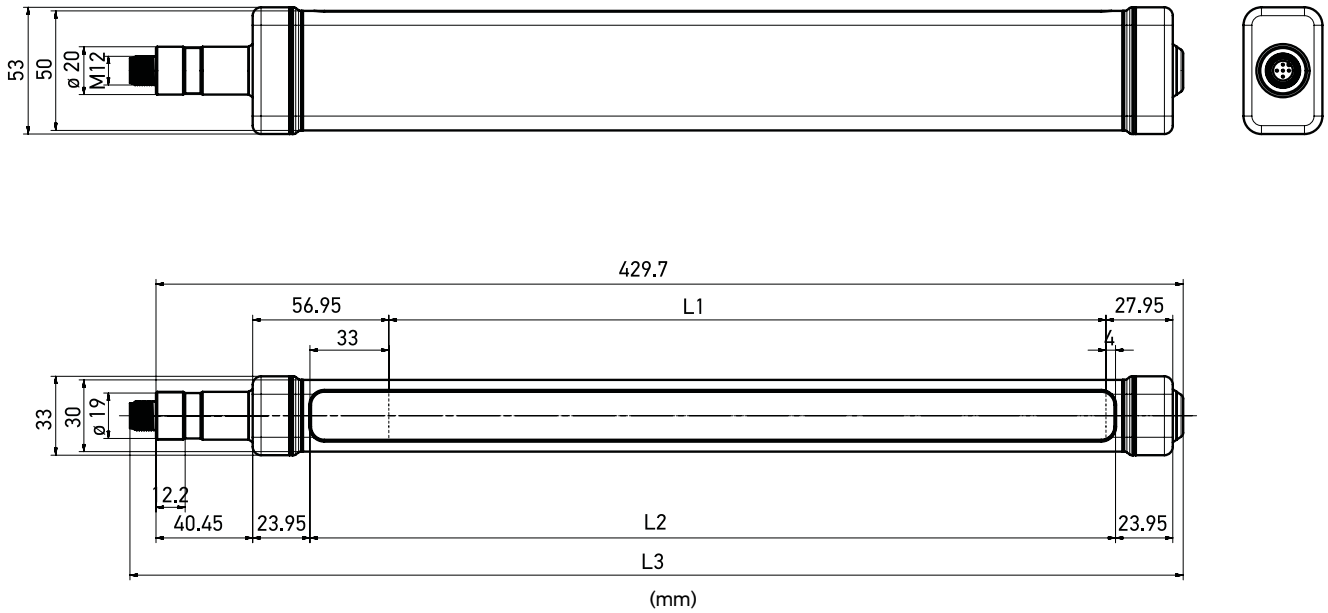


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	OSSD1
3	Blue	0 V
4	Black	OSSD2
5	Gray	NOT USED

MECHANICAL DRAWINGS

SG4-H14-0*5-00-X-B

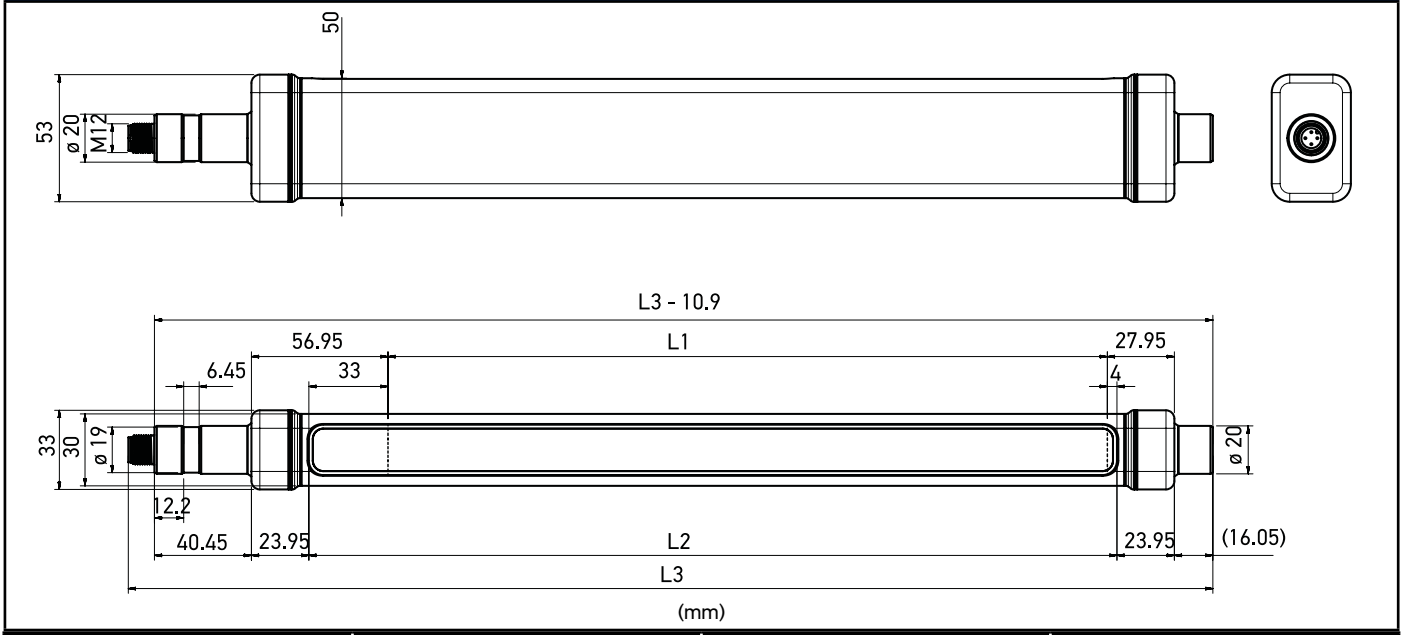


(mm)

Model	L1 (mm)	L2 (mm)	L3 (mm)
SG4-14-150-00-X-B	150	187	290.6
SG4-14-300-00-X-B	300	337	-
SG4-14-450-00-X-B	450	487	

MECHANICAL DRAWINGS

SG4-H14-0*5-00-X-G



Model	L1 (mm)	L2 (mm)	L3 (mm)
SG4-14-150-00-X-G	150	187	302.3
SG4-14-300-00-X-G	300	337	-
SG4-14-450-00-X-G	450	487	

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-02-U-03	Cable M12 4 poles axial female unshielded 3m UL 2464	95ASE1120
	CS-A1-02-U-05	Cable M12 4 poles axial female unshielded 5m UL 2464	95ASE1130
	CS-A1-02-U-10	Cable M12 4 poles axial female unshielded 10m UL 2464	95ASE1140
	CS-A1-02-U-15	Cable M12 4 poles axial female unshielded 15m UL 2464	95ASE1150
	CS-A1-02-U-25	Cable M12 4 poles axial female unshielded 25m UL 2464	95ASE1160
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Test pieces	TP-14	Safety light curtains test piece ø 14 mm	95ACC1630
	TP-14 (30 pcs)	Safety light curtains test piece ø 14 mm Box 30 pcs	95ASE2810

DATASENSING
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WEBSITE

SG4 Fieldbus

SAFETY LIGHT CURTAIN WITH POWERLINK FIELDBUS



Safety light curtain with integrated openSAFETY over POWERLINK protocol. Complete diagnostic and monitoring available over the communication bus. Doesn't require programming: safety functions are managed in safety PLC using information sent by the light curtain.

- Fast and easy installation, configuration and maintenance
- Complete diagnostic and monitoring available over the communication bus
- Basic models: classic functions available
- Advanced models: each beam status safe information available
- Two M12 connectors on receiver side for POWERLINK connection

- M8 connectors on emitter and receiver for power supply
- Up to 19 m operating range and 1800 m protected height
- Finger, hand and body protection
- Compact dimensions (35 x 42 mm section)
- POWERLINK node address configurable with selector switches
- Functions available in combination with B&R safety controller SL and SLX: auto/manual restart, EDM, Muting, Override
- Functions available for advanced models in combination with B&R safety controller SL: fixed blanking, floating blanking, partial and dynamic muting, warning areas, measurement

SAFETY TYPE 4

CODE DESCRIPTION

SG 4 - 14 - 015 - DP - B

serie	**SG**	SG4 Extended
type	**4**	Type 4
resolution/ beams	**14**	Finger: 14 mm
	30	Hand: 30 mm
	2	2 beams
	3	3 beams
	4	4 beams
monitored height	**015**	150 mm
	030	300 mm
	...	
	180	1800 mm
	060	600 mm (2 beams)
	080	800 mm (3 beams)
	090	900 mm (4 beams)
	120	1200 mm (4 beams)
communication protocol	**OP**	openSAFETY over POWERLINK
version	**A**	Advanced
	B	Basic

TECHNICAL SPECIFICATIONS

	SG4-14-***-OP-*	SG4-30-***-OP-*
	SAFETY TYPE 4	SAFETY TYPE 4
GENERAL DATA		
Operating principle	Emitter + Receiver	
Detection capability	14 mm	30 mm
MONITORED AREA		
Nominal sensing distance	0.2 ... 6 m	0.2 ... 19 m
Controlled height	150 ... 1800 mm	
EMISSION DATA		
Emission	Infrared LED (940nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	OpenSAFETY/POWERLINK Advanced Functions (SG4-**-***-OP-A), OpenSAFETY/POWERLINK Basic Functions (SG4-**-***-OP-B)	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	POWERLINK	
COMMUNICATION		
Network Interface	openSAFETY/POWERLINK	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Emitter	≤ 3 W	
Power consumption - Receiver	≤ 5 W without load	
Maximum DC load current	500 mA each output	
MECHANICAL DATA		
Dimensions	35 x 41.9 x (150 ... 1800) mm	
Material	Painted aluminum / PMMA / PBT Valox 508	
Connections	M8-4 poles (emitter) M8-4 poles + 2x M12-4 poles D-Coded (receiver)	
Length of cables (Power)	≤ 50 m	
CERTIFICATIONS		
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)	
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)	
Electromagnetic compatibility	IEC EN 60947-5-2	
ENVIRONMENTAL DATA		
Operating Temperature	0 ... 50 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP65	
Humidity	15 ... 95 % no condensation	
Ambient light immunity	According to IEC 61496-2	

TECHNICAL SPECIFICATIONS

	SG4-S2-060-OP-B	SG4-S3-080-OP-B	SG4-S4-***-OP-B
		SAFETY TYPE 4	
GENERAL DATA			
Operating principle	Emitter + Receiver		
Detection capability	600 mm	400 mm	300 mm
MONITORED AREA			
Nominal sensing distance	0.2 ... 19 m		
Controlled height	500 mm	800 mm	900 ... 1200 mm
EMISSION DATA			
Emission	Infrared LED (940nm)		
Effective beam angle	≤ ±2.5 °		
FUNCTIONS			
Available functions	OpenSAFETY/POWERLINK Basic Functions (SG4-**-***-OP-B)		
SAFETY PARAMETERS			
Type	4		
Pl	e		
SIL	SIL 3 (IEC 61508)		
INPUT/OUTPUT			
Output type	POWERLINK		
COMMUNICATION			
Network Interface	openSAFETY/POWERLINK		
ELECTRICAL DATA			
Supply voltage	24 Vdc ±20%		
Power consumption - Emitter	≤ 3 W		
Power consumption - Receiver	≤ 5 W without load		
Maximum DC load current	500 mA each output		
MECHANICAL DATA			
Dimensions	35 x 41.9 x (500) mm	35 x 41.9 x (800) mm	35 x 41.9 x (900 ... 1200) mm
Material	Painted aluminum / PMMA / PBT Valox 508		
Connections	M8-4 poles (emitter) M8-4 poles + 2x M12-4 poles D-Coded (receiver)		
Length of cables (Power)	≤ 50 m		
CERTIFICATIONS			
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)		
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)		
Electromagnetic compatibility	IEC EN 60947-5-2		
ENVIRONMENTAL DATA			
Operating Temperature	0 ... 50 °C		
Storage temperature max.	-25 ... 70 °C		
Mechanical Protection	IP65		
Humidity	15 ... 95 % no condensation		
Ambient light immunity	According to IEC 61496-2		

AVAILABLE MODELS

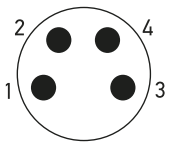
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Finger prot. res. 14 openSAFETY 14 mm	0.2 ... 6 m	150 mm	16	19 ms	**SG4-14-015-OP-B** (957901770)
					14 ms	**SG4-14-015-OP-A** (957902050)
			300 mm	32	22 ms	**SG4-14-030-OP-B** (957901780)
					16 ms	**SG4-14-030-OP-A** (957902060)
			450 mm	48	18 ms	**SG4-14-045-OP-A** (957902070)
					25 ms	**SG4-14-045-OP-B** (957901790)
			600 mm	64	29 ms	**SG4-14-060-OP-B** (957901800)
					21 ms	**SG4-14-060-OP-A** (957902080)
			750 mm	80	31 ms	**SG4-14-075-OP-B** (957901810)
					23 ms	**SG4-14-075-OP-A** (957902090)
			900 mm	96	35 ms	**SG4-14-090-OP-B** (957901820)
					25 ms	**SG4-14-090-OP-A** (957902100)
			1050 mm	112	38 ms	**SG4-14-105-OP-B** (957901830)
					27 ms	**SG4-14-105-OP-A** (957902110)
			1200 mm	128	41 ms	**SG4-14-120-OP-B** (957901840)
					29 ms	**SG4-14-120-OP-A** (957902120)
			1350 mm	144	44 ms	**SG4-14-135-OP-B** (957901850)
					31 ms	**SG4-14-135-OP-A** (957902130)
			1500 mm	160	47 ms	**SG4-14-150-OP-B** (957901860)
					33 ms	**SG4-14-150-OP-A** (957902140)
			1650 mm	176	51 ms	**SG4-14-165-OP-B** (957901870)
					35 ms	**SG4-14-165-OP-A** (957902150)
			1800 mm	192	54 ms	**SG4-14-180-OP-B** (957901880)
					38 ms	**SG4-14-180-OP-A** (957902160)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
4	Hand prot. res. 30 openSAFETY 30 mm	0.2 ... 19 m	150 mm	8	19 ms	**SG4-30-015-OP-B** (957901890)
					14 ms	**SG4-30-015-OP-A** (957902170)
			300 mm	16	21 ms	**SG4-30-030-OP-B** (957901900)
					15 ms	**SG4-30-030-OP-A** (957902180)
			450 mm	24	16 ms	**SG4-30-045-OP-A** (957902190)
					22 ms	**SG4-30-045-OP-B** (957901910)
			600 mm	32	24 ms	**SG4-30-060-OP-B** (957901920)
					17 ms	**SG4-30-060-OP-A** (957902200)
			750 mm	40	25 ms	**SG4-30-075-OP-B** (957901930)
					18 ms	**SG4-30-075-OP-A** (957902210)
			900 mm	48	27 ms	**SG4-30-090-OP-B** (957901940)
					19 ms	**SG4-30-090-OP-A** (957902220)
			1050 mm	56	29 ms	**SG4-30-105-OP-B** (957901950)
					20 ms	**SG4-30-105-OP-A** (957902230)
			1200 mm	64	31 ms	**SG4-30-120-OP-B** (957901960)
					21 ms	**SG4-30-120-OP-A** (957902240)
			1350 mm	72	32 ms	**SG4-30-135-OP-B** (957901970)
					23 ms	**SG4-30-135-OP-A** (957902250)
			1500 mm	80	34 ms	**SG4-30-150-OP-B** (957901980)
					24 ms	**SG4-30-150-OP-A** (957902260)
			1650 mm	88	36 ms	**SG4-30-165-OP-B** (957901990)
					25 ms	**SG4-30-165-OP-A** (957902270)
			1800 mm	96	38 ms	**SG4-30-180-OP-B** (957902000)
					27 ms	**SG4-30-180-OP-A** (957902280)
	Body prot. 2 beams openSAFETY 600 mm		500 mm	2	24 ms	**SG4-S2-060-OP-B** (957902010)
	Body prot. 3 beams openSAFETY 400 mm		800 mm	3	27 ms	**SG4-S3-080-OP-B** (957902020)
	Body prot. 4 beams openSAFETY 300 mm		900 mm	4		**SG4-S4-090-OP-B** (957902030)
			1200 mm		31 ms	**SG4-S4-120-OP-B** (957902040)

CONNECTIONS

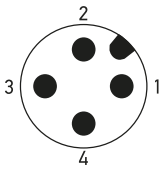
SG4--***-OP-***
(Power connector)



MALE
M8
4 pins

1	Brown	+10...30Vdc
2	White	N/A
3	Blue	0Vdc
4	Black	N/A

SG4--***-OP-***
(Powerlink Connector)

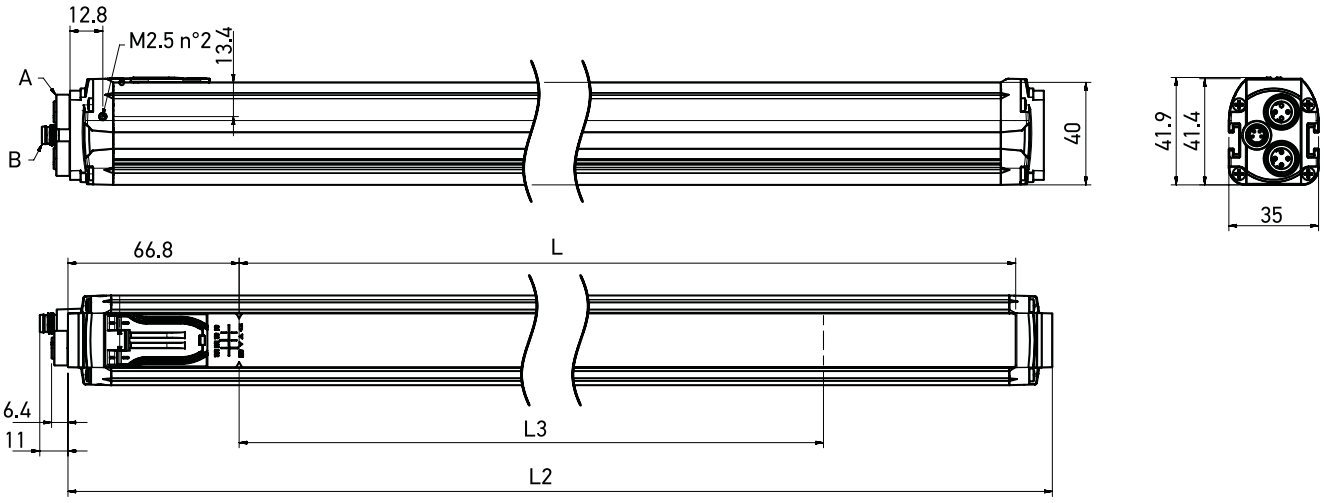


MALE
M12
4 pins

1	White/Orange	TxD+
2	White/Green	RxD+
3	Orange	TxD-
4	Green	RxD-

MECHANICAL DRAWINGS

SG4--0**-OP-***

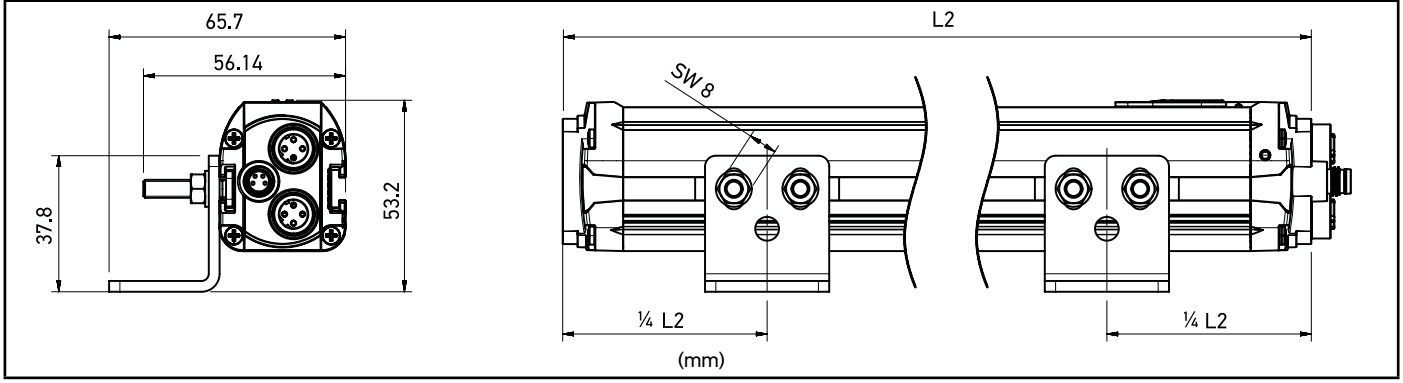


(mm)

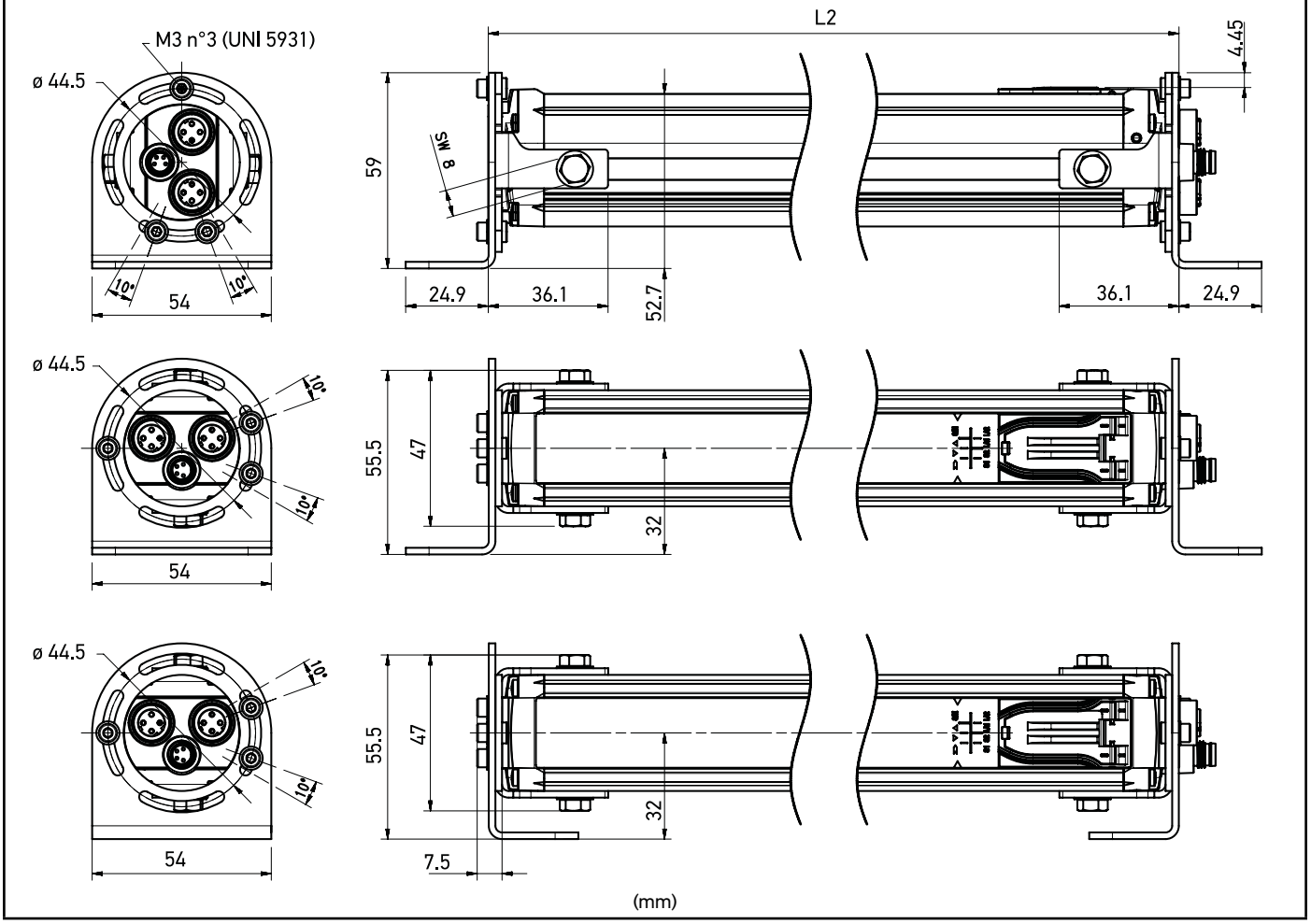
Models	L1 (mm)	L2 (mm)
SG4-**-015-OP-*	150	236.6
SG4-**-030-OP-*	300	383.3
SG4-**-045-OP-*	450	533
SG4-**-060-OP-*	600	682.7
SG4-**-075-OP-*	750	832.4
SG4-**-090-OP-*	900	982.1
SG4-**-105-OP-*	1050	1131.8
SG4-**-120-OP-*	1200	1281.5
SG4-**-135-OP-*	1350	1431.2
SG4-**-150-OP-*	1500	1580.9
SG4-**-165-OP-*	1650	1739.6
SG4-**-180-OP-*	1800	1880.3
SG4-S2-060-OP-*	600	682.7
SG4-S2-080-OP-*	825	982.1
SG4-S2-090-OP-*	900	
SG4-S2-120-OP-*	1200	1281.5

MECHANICAL DRAWINGS

SG4-**-0**-OP-* SG4 Fieldbus with ST-KTSTD fixing bracket



SG4-**-0**-OP-* SG4 fieldbus with ST-K4-ROT-OP fixing brackets



ACCESSORIES

	Model	Description	Article code
Cables	CS-B1-02-G-03	CS-B1-02-G-03 4 pins M8 3m grey	95A251420
	CS-B1-02-G-05	CS-B1-02-G-05 = M8 4-p axial 5m	95A251430
	CS-B1-02-G-10	CS-B1-02-G-10 4 pins M8 10m grey	95A251480
	CAB-ETH-M01	M12-RJ45 IP67 ethernet cable 1m	93A051346
	CAB-ETH-M03	M12-RJ45 IP67 ethernet cable 3m	93A051347
	CAB-ETH-M05	M12-RJ45 IP67 ethernet cable 5m	93A051348
	CAB-ETH-M10	M12-RJ45 IP67 ethernet cable 10m	93A051391
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mirrors brackets	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-K4ROT-OP	Metal top-bottom rotative brackets 4 pcs kit for SG4 FIELDBUS	95ASE2840
Protective stands	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760

COMPATIBILITY WITH B&R HARDWARE AND SOFTWARE
Due to the characteristics of the functional blocks that have been developed by B&R in order to communicate with DATALOGIC SG4 FIELDBUS safety light curtains, always check to have the following versions or newer:
1) SG4 Fieldbus Base:
HW: SafeLOGIC SL81xx, SLXxxx
SW: SafetyRelease 1.10, SafeDESIGNER 4.2.x, Automation Studio 4.2.8.x, SL Upgrades 1.10.x.x
2) SG4 Fieldbus Advanced:
HW: SL81xx only
SW: SafetyRelease 1.10, SafeDESIGNER 4.3.3, Automation Studio 4.3.3, SL Upgrades 1.10.2.x

DATASENSING
easing automation challenges

IP69K (*)

WEBSITE

SG2 Base

TYPE 2 SAFETY LIGHT CURTAIN WITH BASIC FUNCTIONALITY



Safety light curtain for hand, arm and presence detection with basic functions. High reliability, easy installation and alignment, cost effective solution for simple protection needs.

- High reliability
- Easy installation and alignment
- Cost effective
- Finger, hand, arm detection with basic functions

- 90 mm version for presence detection
- Up to 19 m operating distance
- Compact dimensions (32.3 x 36.9 mm section)
- Anti-interfence coding
- IP65 Protection
- Unshielded cables
- Rotating and anti-vibration brackets

SAFETY TYPE 2

CODE DESCRIPTION

SG 2 - 30 - 015 - 00 - X

serie	**SG**	SG2 Base
type	**2**	Type 2
resolution	**30**	Hand: 30 mm
	50	Arm: 50 mm
	90	Arm: 90 mm
monitored height	**015**	150 mm
	030	300 mm
	...	
	180	1800 mm
output	**00**	
functionality	**X**	Basic (automatic restart)

(*) IP69K with optional tube

TECHNICAL SPECIFICATIONS

	SG2-**-***-00-X
	
GENERAL DATA	
Operating principle	Emitter + Receiver
Detection capability	30, 50, 90 mm
MONITORED AREA	
Nominal sensing distance	0.2 ... 19 m
Controlled height	150 ... 1800 mm
EMISSION DATA	
Emission	Infrared LED (850nm)
Effective beam angle	≤ ±5 °
FUNCTIONS	
Available functions	Automatic Restart
SAFETY PARAMETERS	
Type	2
Pl	c
SIL	SIL 1 (IEC 61508)
INPUT/OUTPUT	
Output type	2 x PNP (OSSD safety output)
ELECTRICAL DATA	
Supply voltage	24 Vdc ±20%
Power consumption - Emitter	≤ 2 W
Power consumption - Receiver	≤ 3 W without load
Maximum DC load current	500 mA each output
Capacitive load tolerated	≥ 2.2 µF
MECHANICAL DATA	
Dimensions	32.3 x 36.9 x (150 ... 1800) mm
Material	Painted aluminum / PMMA / PC MAKROLON
Connections	M12-4 poles (emitter) M12-5 poles (receiver)
Length of cables (Power)	≤ 50 m
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
Electromagnetic compatibility	IEC EN 60947-5-2
ENVIRONMENTAL DATA	
Operating Temperature	-10 ... 55 °C
Storage temperature max.	-25 ... 70 °C
Mechanical Protection	IP65
Humidity	15 ... 95 % no condensation
Ambient light immunity	According to IEC 61496-2

AVAILABLE MODELS

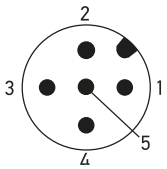
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Hand protection res. 30 mm	0.2 ... 19 m	150 mm	8	8 ms	**SG2-30-015-00-X** (957801000)
			300 mm	16	9 ms	**SG2-30-030-00-X** (957801010)
			450 mm	24	11 ms	**SG2-30-045-00-X** (957801020)
			600 mm	32	12 ms	**SG2-30-060-00-X** (957801030)
			750 mm	40	14 ms	**SG2-30-075-00-X** (957801040)
			900 mm	48	15 ms	**SG2-30-090-00-X** (957801050)
			1050 mm	56	17 ms	**SG2-30-105-00-X** (957801060)
			1200 mm	64	18 ms	**SG2-30-120-00-X** (957801070)
			1350 mm	72	20 ms	**SG2-30-135-00-X** (957801080)
			1500 mm	80	21 ms	**SG2-30-150-00-X** (957801090)
			1650 mm	88	23 ms	**SG2-30-165-00-X** (957801100)
			1800 mm	96	24 ms	**SG2-30-180-00-X** (957801110)
	Arm protection res. 50 mm		300 mm	9	9 ms	**SG2-50-030-00-X** (957801120)
			450 mm	13	10 ms	**SG2-50-045-00-X** (957801130)
			600 mm	17	11 ms	**SG2-50-060-00-X** (957801140)
			750 mm	21	12 ms	**SG2-50-075-00-X** (957801150)
			900 mm	25	14 ms	**SG2-50-090-00-X** (957801160)
			1050 mm	29	15 ms	**SG2-50-105-00-X** (957801170)
			1200 mm	33	16 ms	**SG2-50-120-00-X** (957801180)
			1350 mm	37	17 ms	**SG2-50-135-00-X** (957801190)
			1500 mm	41	18 ms	**SG2-50-150-00-X** (957801200)
			1650 mm	45	19 ms	**SG2-50-165-00-X** (957801210)
			1800 mm	49	20 ms	**SG2-50-180-00-X** (957801220)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Presence protection res. 90 mm	0.2 ... 19 m	300 mm	5	9 ms	**SG2-90-030-00-X** (957801230)
			450 mm	7	10 ms	**SG2-90-045-00-X** (957801240)
			600 mm	9	11 ms	**SG2-90-060-00-X** (957801250)
			750 mm	11	12 ms	**SG2-90-075-00-X** (957801260)
			900 mm	13	13 ms	**SG2-90-090-00-X** (957801270)
			1050 mm	15	14 ms	**SG2-90-105-00-X** (957801280)
			1200 mm	17	15 ms	**SG2-90-120-00-X** (957801290)
			1350 mm	19	16 ms	**SG2-90-135-00-X** (957801300)
			1500 mm	21	17 ms	**SG2-90-150-00-X** (957801310)
			1650 mm	23	18 ms	**SG2-90-165-00-X** (957801320)
			1800 mm	25	19 ms	**SG2-90-180-00-X** (957801330)

CONNECTIONS

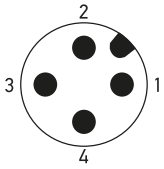
SG2--***-00-X (Receiver)**



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	OSSD1
3	Blue	0 V
4	Black	OSSD2
5	Gray	Test/Reset

SG2--***-00-X (Emitter)**

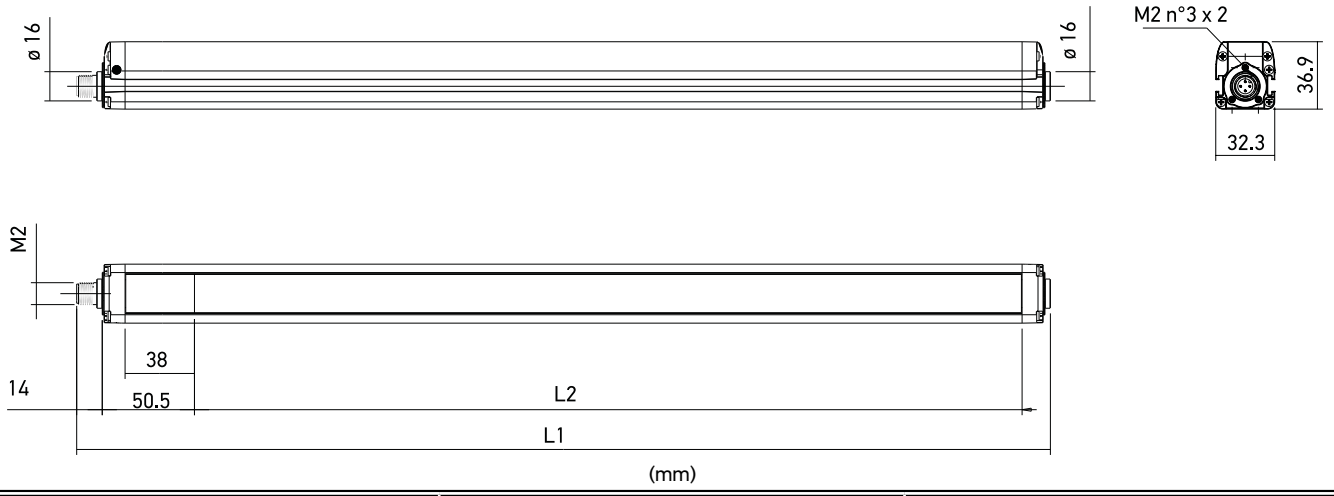


MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED

MECHANICAL DRAWINGS

SG2--***-00-X**



Models	L1 (mm)	L2 (mm)
SG2-**-015-00-X	233.3	153.3
SG2-**-030-00-X	383.2	303.2
SG2-**-045-00-X	533.2	453.3
SG2-**-060-00-X	683.2	603.2
SG2-**-075-00-X	833.2	753.3
SG2-**-090-00-X	983.2	903.2
SG2-**-105-00-X	1133.2	1053.2
SG2-**-120-00-X	1283.2	1203.3
SG2-**-135-00-X	1433.2	1253.2
SG2-**-150-00-X	1583.2	1503.3
SG2-**-165-00-X	1733.3	1653.3
SG2-**-180-00-X	1883.3	1803.3

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-02-U-03	Cable M12 4 poles axial female unshielded 3m UL 2464	95ASE1120
	CS-A1-02-U-05	Cable M12 4 poles axial female unshielded 5m UL 2464	95ASE1130
	CS-A1-02-U-10	Cable M12 4 poles axial female unshielded 10m UL 2464	95ASE1140
	CS-A1-02-U-15	Cable M12 4 poles axial female unshielded 15m UL 2464	95ASE1150
	CS-A1-02-U-25	Cable M12 4 poles axial female unshielded 25m UL 2464	95ASE1160
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
IP69K protections	SG-IP69K-150	IP69K protection tubes for SG BASE h=150mm	95ASE1290
	SG-IP69K-300	IP69K protection tubes for SG BASE h=300mm	95ASE1300
	SG-IP69K-450	IP69K protection tubes for SG BASE h=450mm	95ASE1310
	SG-IP69K-600	IP69K protection tubes for SG BASE h=600mm	95ASE1320
	SG-IP69K-750	IP69K protection tubes for SG BASE h=750mm	95ASE1330
	SG-IP69K-900	IP69K protection tubes for SG BASE h=900mm	95ASE1340
	SG-IP69K-1050	IP69K protection tubes for SG BASE h=1050mm	95ASE1350
	SG-IP69K-1200	IP69K protection tubes for SG BASE h=1200mm	95ASE1360
	SG-IP69K-1350	IP69K protection tubes for SG BASE h=1350mm	95ASE1370
	SG-IP69K-1500	IP69K protection tubes for SG BASE h=1500mm	95ASE1380
	SG-IP69K-1650	IP69K protection tubes for SG BASE h=1650mm	95ASE1390
	SG-IP69K-1800	IP69K protection tubes for SG BASE h=1800mm	95ASE1400
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K4AV (30 pcs)	Anti vibration supports Box 30 x 4 pcs	95ASE2770
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
Protective stands	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

DATASENSING
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IP69K (*)

WEBSITE

SG2 Extended

TYPE 2 SAFETY LIGHT CURTAIN WITH STANDARD FUNCTIONALITY



Finger and hand presence safety detection with manual restart and EDM functionalities.

- High reliabilityEasy installation and alignment
- Cost effective Finger, hand, arm detection with standard functions
- 90 mm version for presence detection
- Up to 19 m operating distance
- Compact dimensions (32.3 x 36.9 mm section)
- Anti-interfence coding
- IP65 Protection; IP69K with optional tube
- Unshielded cables
- Rotating and anti-vibration brackets

SAFETY TYPE 2

CODE DESCRIPTION

SG 2 - 30 - 015 - 00 - E-C

serie	**SG**	SG2 Extended
type	**2**	Type 2
resolution	**30**	Hand: 30 mm
	50	Arm: 50 mm
	90	Arm: 90 mm
monitored height	**015**	150 mm
	030	300 mm
	...	
	180	1800 mm
output	**00**	
functionality	**E-C**	Standard (auto/manual restart, EDM)

(*) IP69K with optional tube

TECHNICAL SPECIFICATIONS

	SG2-**-***-00-E-C
	SAFETY TYPE 2
GENERAL DATA	
Operating principle	Emitter + Receiver
Detection capability	30, 50, 90 mm
MONITORED AREA	
Nominal sensing distance	0.2 ... 19 m
Controlled height	150 ... 1800 mm
EMISSION DATA	
Emission	Infrared LED (850nm)
Effective beam angle	≤ ±5 °
FUNCTIONS	
Available functions	Manual/Automatic Restart, EDM, Range Reduction (on TX)
SAFETY PARAMETERS	
Type	2
Pl	c
SIL	SIL 1 (IEC 61508)
INPUT/OUTPUT	
Output type	2 x PNP (OSSD safety output) with EDM
ELECTRICAL DATA	
Supply voltage	24 Vdc ±20%
Power consumption - Emitter	≤ 2 W
Power consumption - Receiver	≤ 3 W without load
Maximum DC load current	500 mA each output
Capacitive load tolerated	≥ 2.2 µF
MECHANICAL DATA	
Dimensions	32.3 x 36.9 x (150 ... 1800) mm
Material	Painted aluminum / PMMA / PC MAKROLON
Connections	M12-4 poles (emitter) M12-8 poles (receiver)
Length of cables (Power)	≤ 50 m
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
Electromagnetic compatibility	IEC EN 60947-5-2
ENVIRONMENTAL DATA	
Operating Temperature	-10 ... 55 °C
Storage temperature max.	-25 ... 70 °C
Mechanical Protection	IP65
Humidity	15 ... 95 % no condensation
Ambient light immunity	According to IEC 61496-2

AVAILABLE MODELS

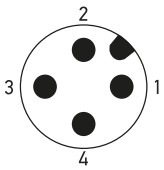
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Hand protection res. 30 mm	0.2 ... 19 m	150 mm	8	8 ms	**SG2-30-015-OO-E-C** (957801340)
			300 mm	16	9 ms	**SG2-30-030-OO-E-C** (957801350)
			450 mm	24	11 ms	**SG2-30-045-OO-E-C** (957801360)
			600 mm	32	12 ms	**SG2-30-060-OO-E-C** (957801370)
			750 mm	40	14 ms	**SG2-30-075-OO-E-C** (957801380)
			900 mm	48	15 ms	**SG2-30-090-OO-E-C** (957801390)
			1050 mm	56	17 ms	**SG2-30-105-OO-E-C** (957801400)
			1200 mm	64	18 ms	**SG2-30-120-OO-E-C** (957801410)
			1350 mm	72	20 ms	**SG2-30-135-OO-E-C** (957801420)
			1500 mm	80	21 ms	**SG2-30-150-OO-E-C** (957801430)
			1650 mm	88	23 ms	**SG2-30-165-OO-E-C** (957801440)
			1800 mm	96	24 ms	**SG2-30-180-OO-E-C** (957801450)
	Arm protection res. 50 mm		300 mm	9	9 ms	**SG2-50-030-OO-E-C** (957801460)
			450 mm	13	10 ms	**SG2-50-045-OO-E-C** (957801470)
			600 mm	17	11 ms	**SG2-50-060-OO-E-C** (957801480)
			750 mm	21	12 ms	**SG2-50-075-OO-E-C** (957801490)
			900 mm	25	14 ms	**SG2-50-090-OO-E-C** (957801500)
			1050 mm	29	15 ms	**SG2-50-105-OO-E-C** (957801510)
			1200 mm	33	16 ms	**SG2-50-120-OO-E-C** (957801520)
			1350 mm	37	17 ms	**SG2-50-135-OO-E-C** (957801530)
			1500 mm	41	18 ms	**SG2-50-150-OO-E-C** (957801540)
			1650 mm	45	19 ms	**SG2-50-165-OO-E-C** (957801550)
			1800 mm	49	20 ms	**SG2-50-180-OO-E-C** (957801560)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Presence protection res. 90 mm	0.2 ... 19 m	300 mm	5	9 ms	**SG2-90-030-OO-E-C** (957801570)
			450 mm	7	10 ms	**SG2-90-045-OO-E-C** (957801580)
			600 mm	9	11 ms	**SG2-90-060-OO-E-C** (957801590)
			750 mm	11	12 ms	**SG2-90-075-OO-E-C** (957801600)
			900 mm	13	13 ms	**SG2-90-090-OO-E-C** (957801610)
			1050 mm	15	14 ms	**SG2-90-105-OO-E-C** (957801620)
			1200 mm	17	15 ms	**SG2-90-120-OO-E-C** (957801630)
			1350 mm	19	16 ms	**SG2-90-135-OO-E-C** (957801640)
			1500 mm	21	17 ms	**SG2-90-150-OO-E-C** (957801650)
			1650 mm	23	18 ms	**SG2-90-165-OO-E-C** (957801660)
			1800 mm	25	19 ms	**SG2-90-180-OO-E-C** (957801670)

CONNECTIONS

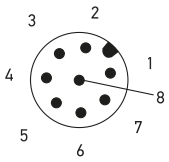
SG2--***-OO-E-C (Emitter)**



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	24V TEST (N.O.)
3	Blue	0 V
4	Black	RANGE SELECTION

SG2--***-OO-E-C (Receiver)**

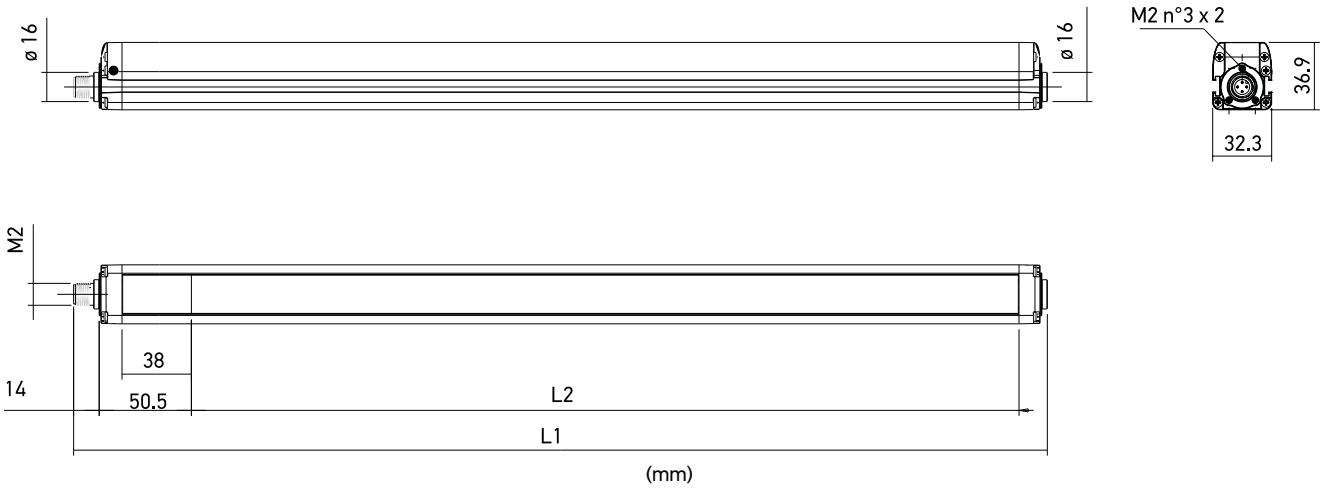


MALE
M12
8 pins

1	White	RESET/RESTART
2	Brown	24 Vdc
3	Green	EDM SELECTION
4	Yellow	EDM INPUT
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0 V
8	Red	MAN/AUTO SELECTION

MECHANICAL DRAWINGS

SG2--***-00-E-C**



(mm)

Models	L1 (mm)	L2 (mm)
SG2-**-015-00-E-C	233.3	153.3
SG2-**-030-00-E-C	383.2	303.2
SG2-**-045-00-E-C	533.2	453.3
SG2-**-060-00-E-C	683.2	603.2
SG2-**-075-00-E-C	833.2	753.3
SG2-**-090-00-E-C	983.2	903.2
SG2-**-105-00-E-C	1133.2	1053.2
SG2-**-120-00-E-C	1283.2	1203.3
SG2-**-135-00-E-C	1433.2	1253.2
SG2-**-150-00-E-C	1583.2	1503.3
SG2-**-165-00-E-C	1733.3	1653.3
SG2-**-180-00-E-C	1883.3	1803.3

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-02-U-03	Cable M12 4 poles axial female unshielded 3m UL 2464	95ASE1120
	CS-A1-02-U-05	Cable M12 4 poles axial female unshielded 5m UL 2464	95ASE1130
	CS-A1-02-U-10	Cable M12 4 poles axial female unshielded 10m UL 2464	95ASE1140
	CS-A1-02-U-15	Cable M12 4 poles axial female unshielded 15m UL 2464	95ASE1150
	CS-A1-02-U-25	Cable M12 4 poles axial female unshielded 25m UL 2464	95ASE1160

ACCESSORIES

	Model	Description	Article code
IP69K protections	SG-IP69K-150	IP69K protection tubes for SG BASE h=150mm	95ASE1290
	SG-IP69K-300	IP69K protection tubes for SG BASE h=300mm	95ASE1300
	SG-IP69K-450	IP69K protection tubes for SG BASE h=450mm	95ASE1310
	SG-IP69K-600	IP69K protection tubes for SG BASE h=600mm	95ASE1320
	SG-IP69K-750	IP69K protection tubes for SG BASE h=750mm	95ASE1330
	SG-IP69K-900	IP69K protection tubes for SG BASE h=900mm	95ASE1340
	SG-IP69K-1050	IP69K protection tubes for SG BASE h=1050mm	95ASE1350
	SG-IP69K-1200	IP69K protection tubes for SG BASE h=1200mm	95ASE1360
	SG-IP69K-1350	IP69K protection tubes for SG BASE h=1350mm	95ASE1370
	SG-IP69K-1500	IP69K protection tubes for SG BASE h=1500mm	95ASE1380
	SG-IP69K-1650	IP69K protection tubes for SG BASE h=1650mm	95ASE1390
	SG-IP69K-1800	IP69K protection tubes for SG BASE h=1800mm	95ASE1400
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mirrors brackets	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
Mounting brackets	ST-K4ROT	Metal top-bottom rotative brackets 4 pcs kit	95ASE1280
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
Protective stands	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010
Safety units	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

WEBSITE

SG2 Muting

TYPE 2 SAFETY LIGHT CURTAIN FOR HAND DETECTION WITH MUTING



Type 2 finger and hand presence safety detection with zero dead zone and integrated muting, configurable with pushbuttons.

- No dead zone
- Pigtail cable with M12 connector
- Up to 20 m operating range and 1800 m protected height
- Compact dimensions (35 x 41 mm section)
- Anti-interference coding
- Integrated Muting function
- Configurable with Push buttons

CODE DESCRIPTION

SG 2 - 30 - 030 - 00 - W

serie	**SG**	SG2 Muting
type	**2**	Type 2
resolution	**30**	Hand: 30 mm
monitored height	**030**	300 mm
	045	450 mm
	...	
	180	1800 mm
output	**00**	
functionality	**W**	Integrated Muting, pushbutton configuration

TECHNICAL SPECIFICATIONS

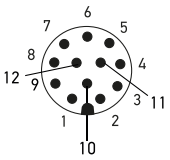
	SG2-**-***-00-W
	SAFETY TYPE 2
GENERAL DATA	
Operating principle	Emitter + Receiver
Detection capability	30 mm
MONITORED AREA	
Nominal sensing distance	0.2 ... 20 m
Controlled height	300 ... 1800 mm
EMISSION DATA	
Emission	Infrared LED (950nm)
Effective beam angle	≤ ±5 °
FUNCTIONS	
Available functions	Manual/Automatic Restart, EDM, Muting, Override, Range Reduction (on TX)
SAFETY PARAMETERS	
Type	2
Pl	c
SIL	SIL 1 (IEC 61508)
INPUT/OUTPUT	
Output type	2 x PNP (OSSD safety output) with EDM
ELECTRICAL DATA	
Supply voltage	24 Vdc ±20%
Power consumption - Emitter	≤ 3 W
Power consumption - Receiver	≤ 5 W without load
Maximum DC load current	500 mA each output
Capacitive load tolerated	≥ 2.2 µF
MECHANICAL DATA	
Dimensions	35 x 40.75 x (300 ... 1800) mm
Material	Painted aluminum / PMMA / PBT Valox 508 / PC LEXAN
Connections	M12-5 poles pig-tail (emitter) M12-12 poles + M12-5poles pig-tails (receiver)
Length of cables (Power)	≤ 50 m
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
Electromagnetic compatibility	IEC EN 60947-5-2
ENVIRONMENTAL DATA	
Operating Temperature	0 ... 50 °C
Storage temperature max.	-25 ... 70 °C
Mechanical Protection	IP65
Humidity	15 ... 95 % no condensation
Ambient light immunity	According to IEC 61496-2

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Hand protection res. 30 muting mm	0.2 ... 20 m	300 mm	16	11 ms	**SG2-30-030-00-W** (957801700)
			450 mm	24	12 ms	**SG2-30-045-00-W** (957801710)
			600 mm	32	13 ms	**SG2-30-060-00-W** (957801720)
			750 mm	40	14 ms	**SG2-30-075-00-W** (957801730)
			900 mm	48	15 ms	**SG2-30-090-00-W** (957801740)
			1050 mm	56	16 ms	**SG2-30-105-00-W** (957801750)
			1200 mm	64	17 ms	**SG2-30-120-00-W** (957801760)
			1350 mm	72	18 ms	**SG2-30-135-00-W** (957801770)
			1500 mm	80	19 ms	**SG2-30-150-00-W** (957801780)
			1650 mm	88		**SG2-30-165-00-W** (957801790)
			1800 mm	96	20 ms	**SG2-30-180-00-W** (957801800)

CONNECTIONS

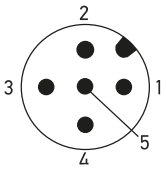
SG2--***-00-W (Receiver)**



MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	RESET/RESTART/ALIGN
4	Green	OVERRIDE1
5	Pink	OSSD2
6	Yellow	EDM
7	Black	MUTING DISABLE
8	Gray	OSSD1
9	Red	OVERRIDE2
10	Violet	LAMP OUTPUT
11	Gray /Pink	OVERRIDE STATUS
12	Red/ Blue	EARTH

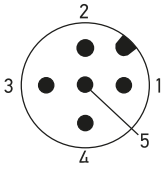
SG2--***-00-W (Emitter)**



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	EARTH
5	Gray	RANGE REDUCTION

SG2--***-00-W (Receiver)**

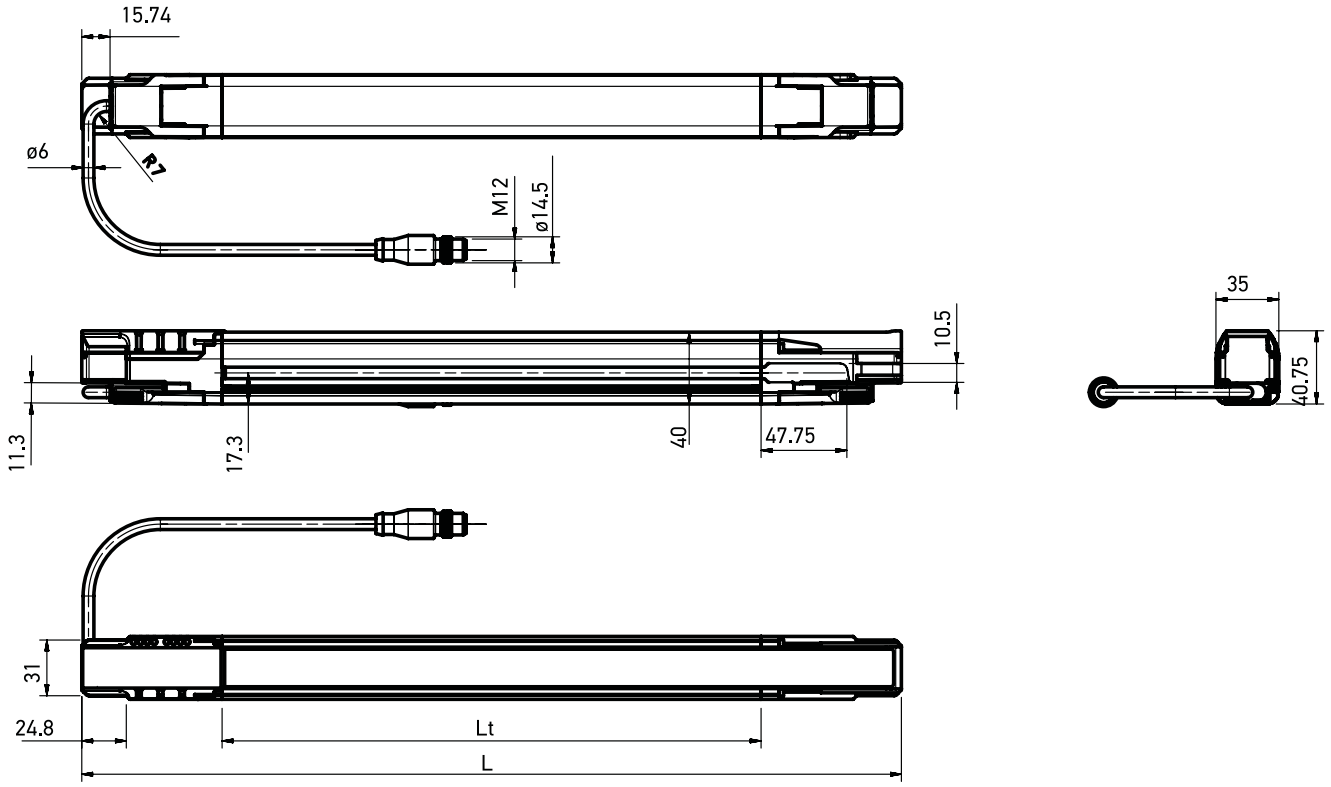


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	NOT USED

MECHANICAL DRAWINGS

SG2--***-00-W**



(mm)

A	L (mm)	Lt (mm)
SG2-**-015-00-W	233.3	153.3
SG2-**-030-00-W	383.2	303.2
SG2-**-045-00-W	533.2	453.3
SG2-**-060-00-W	683.2	603.2
SG2-**-075-00-W	833.2	753.3
SG2-**-090-00-W	983.2	903.2
SG2-**-105-00-W	1133.2	1053.2
SG2-**-120-00-W	1283.2	1203.3
SG2-**-135-00-W	1433.2	1253.2
SG2-**-150-00-W	1583.2	1503.3
SG2-**-165-00-W	1733.3	1653.3
SG2-**-180-00-W	1883.3	1803.3

ACCESSORIES

	Model	Description	Article code
Cables	CS-G1-50-B-002	Pigtail cable for SG4 EXTENDED transmitter M12 5p male connector 0.2m	95A252820
	CS-R1-75-B-002	Pigtail cable for SG4 EXTENDED receiver muting function M12 12p + 5p male connectors 0.2m	95A252810
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CS-A1-10-U-03	Cable M12 12 poles axial female unshielded 3m UL 2464	95A252720
	CS-A1-10-U-05	Cable M12 12 poles axial female unshielded 5m UL 2464	95A252730
	CS-A1-10-U-10	Cable M12 12 poles axial female unshielded 10m UL 2464	95A252740
	CS-A1-10-U-15	Cable M12 12 poles axial female unshielded 15m UL 2464	95A252750
	CS-A1-10-U-25	Cable M12 12 poles axial female unshielded 25m UL 2464	95A252760
	CS-A1-10-U-50	Cable M12 12 poles axial female unshielded 50m UL 2464	95A252770
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mirrors brackets	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K6OR	Orientable supports 6 pcs kit to be used with ST-KSTD	95ACC1690
Muting lamps	LMS-1	Modular muting lamp	95ACC1990
	LMS-2	Muting lamp horizontal fixing	95ACC2000
	LMS-3	Muting lamp vertical fixing	95ACC2010
	LMS	Muting lamp	95ASE1830
Protective stands	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010
Vertical supports	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730
	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770

ACCESSORIES

	Model	Description	Article code
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges

WEBSITE

SG BODY COMPACT BASE / MUTING

COMPACT TYPE 2 AND TYPE 4 SAFETY LIGHT GRID FOR BODY DETECTION



Safety light curtain with compact housing and long operating range, ideal for access or perimeter control.
Integrated muting and override functions.

- Body access detection
- Perimeter control
- Rapid solution for access control with muting

- Easy installation and alignment
- L and T muting models provided with Retroreflective Muting Arms
- Two, three or four beams for body protection
- Controlled heights of 500, 800, 900 and 1200 mm
- Long operating distance: up to 50 m
- Simple configuration through DIP switches
- Integrated muting lamp (only on muting models)

SAFETY TYPE 2 SAFETY TYPE 4

CODE DESCRIPTION

SG 2 - S2 - 050 - PP - X

serie	**SG**	SG Body Compact Base / Muting
type	**2**	Type 2
	4	Type 4
beams and muting arms	**S2**	2 Beams
	S3	3 Beams
	S4	4 Beams
	T2	2 Beams with T muting arms (RRX)
	T3	3 Beams with T muting arms (RRX)
	L2	2 Beams with L muting arms (RRX)
	L3	2 Beams with L muting arms (RRX)
monitored height	**050**	500 mm (2 beams)
	080	800 mm (3 beams)
	090	900 mm (4 beams)
	120	1200 mm (4 beams)
output	**PP**	
functionality	**X**	Basic (automatic restart)
	E	Standard (auto/manual restart, EDM)
	W	Integrated Muting, configurable with DIP switches, two connectors
	N	Integrated Muting, configurable with DIP switches, one connector

TECHNICAL SPECIFICATIONS

	SG*-*2-***-PP-*	SG*-*3-***-PP-*	SG*-*4-090-PP-*	SG*-*4-120-PP-*
		SAFETY TYPE 2	SAFETY TYPE 4	
GENERAL DATA				
Operating principle	Emitter + Receiver			
Detection capability	500 mm	400 mm	300 mm	
MONITORED AREA				
Nominal sensing distance	0.5 ... 50 m			
Controlled height	500 mm	800 mm	900 mm	1200 mm
EMISSION DATA				
Emission	Infrared LED (880nm)			
Effective beam angle	≤ ±2.5 ° (SG4-**-***-PP-*), ≤ ±5 ° (SG2-**-***-PP-*) °			
FUNCTIONS				
Available functions	Automatic Restart (SG*-**-***-PP-X), Manual/Automatic Restart, EDM (SG*-**-***-PP-E), Manual/Automatic Restart, EDM, L/T Muting, Override (SG*-**-***-PP-W), Manual/Automatic Restart, EDM, L/T Muting, Partial Muting, Override, Range Reduction (on TX) (SG*-**-***-PP-N)			
Included accessories	Standard "L" Mounting Brackets: 4 pcs kit			Standard "L" Mounting Brackets: 6 pcs kit
SAFETY PARAMETERS				
Type	2 (SG2-**-***-PP-*), 4 (SG4-**-***-PP-*)			
Pl	c (SG2-**-***-PP-*), e (SG4-**-***-PP-*)			
SIL	SIL 1 (IEC 61508) (SG2-**-***-PP-*), SIL 3 (IEC 61508) (SG4-**-***-PP-*)			
INPUT/OUTPUT				
Output type	2 x PNP (OSSD safety output)			
ELECTRICAL DATA				
Supply voltage	24 Vdc ±20%			
Power consumption - Emitter	≤ 0.9 W			
Power consumption - Receiver	≤ 2.2 W without load			
Maximum DC load current	500 mA each output			
Capacitive load tolerated	≤ 65 nF			
Equivalent resistive load	≥ 56 Ω			
MECHANICAL DATA				
Dimensions	35 x 41.9 x (500) mm	35 x 41.9 x (800) mm	35 x 41.9 x (900) mm	35 x 41.9 x (1200) mm
Material	Painted aluminum / PMMA / PC Lexan 943A			
Connections	M12-4 poles (emitter) M12-5 poles (receiver) (SG4-**-***-PP-X), M12-4 poles (emitter) M12-8 poles (receiver) (SG*-**-***-PP-E/N), M12-4 poles + M12-5 poles (emitter) M12-8 poles + M12-5 poles (receiver) (SG*-**-***-PP-W)			
Length of cables (Power)	≤ 50 m			
CERTIFICATIONS				
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)			
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)			
Electromagnetic compatibility	IEC EN 60947-5-2			
ENVIRONMENTAL DATA				
Operating Temperature	0 ... 55 °C			
Storage temperature max.	-25 ... 70 °C			
Mechanical Protection	IP65			
Humidity	15 ... 95 % no condensation			
Ambient light immunity	According to IEC 61496-2			

AVAILABLE MODELS

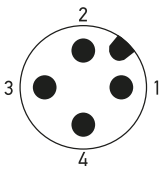
Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	500 mm	0.5 ... 50 m	500 mm	2	14 ms	**SG2-S2-050-PP-E** (957851000)
						SG2-T2-050-PP-W (957851140)
						SG2-S2-050-PP-W (957851080)
						SG2-L2-050-PP-W (957851120)
	400 mm		800 mm	3		**SG2-S3-080-PP-E** (957851010)
						SG2-T3-080-PP-W (957851150)
						SG2-L3-080-PP-W (957851130)
						SG2-S3-080-PP-W (957851090)
4	500 mm		500 mm	2		**SG4-S2-050-PP-E** (957851040)
						SG4-S2-050-PP-W (957851160)
						SG4-L2-050-PP-W (957851200)
						SG4-T2-050-PP-W (957851220)
						SG4-S2-050-PP-X (957851600)
						SG4-S2-050-PP-N (957851640)
	400 mm		800 mm	3		**SG4-S3-080-PP-E** (957851050)
						SG4-S3-080-PP-W (957851170)
						SG4-T3-080-PP-W (957851230)
						SG4-L3-080-PP-W (957851210)
						SG4-S3-080-PP-X (957851610)
						SG4-S3-080-PP-N (957851650)

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	300 mm	0.5 ... 50 m	900 mm	4	16 ms	**SG2-S4-090-PP-E** (957851020)
						SG2-S4-090-PP-W (957851100)
			1200 mm			**SG2-S4-120-PP-E** (957851030)
						SG2-S4-120-PP-W (957851110)
4			900 mm			**SG4-S4-090-PP-W** (957851180)
						SG4-S4-090-PP-X (957851620)
				2		**SG4-S4-090-PP-N** (957851660)
				4		**SG4-S4-090-PP-E** (957851060)
			1200 mm			**SG4-S4-120-PP-W** (957851190)
						SG4-S4-120-PP-E (957851070)
						SG4-S4-120-PP-X (957851630)
				3		**SG4-S4-120-PP-N** (957851670)

CONNECTIONS

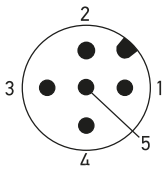
SG4-S*-*-PP-X (Emitter)**



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED

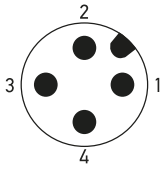
SG4-S*-*-PP-X (Receiver)**



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	OSSD1
3	Blue	0 V
4	Black	OSSD2

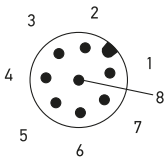
SG*-S*-*-PP-E (Emitter)**



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED

SG*-S*-*-PP-E (Receiver)**

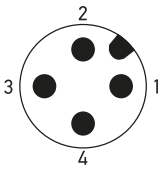


MALE
M12
8 pins

1	White	TEST/START
2	Brown	24Vdc
3	Green	NOT USED
4	Yellow	EDM
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	NOT USED

CONNECTIONS

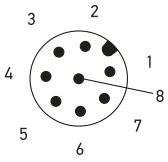
SG*-**-***-PP-W (Emitter)



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED

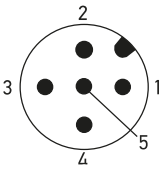
SG*-**-***-PP-W (Receiver)



MALE
M12
8 pins

1	White	TEST/START
2	Brown	24Vdc
3	Green	OVERRIDE1
4	Yellow	EDM
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	OVERRIDE2

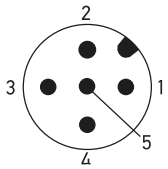
SG*-**-***-PP-W (Receiver)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	NOT USED

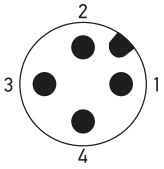
SG*-**-***-PP-W (Receiver)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED
5	Gray	NOT USED

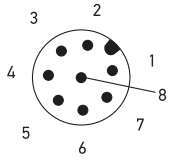
SG4-S*-***-PP-N (Emitter)



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED

SG4-S*-***-PP-N (Receiver)

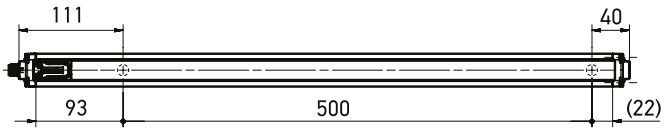


MALE
M12
8 pins

1	White	RESTART/RESET/EDM/ OVERRIDE
2	Brown	24Vdc
3	Green	MUTING1
4	Yellow	MUTING2
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	MUTING LAMP

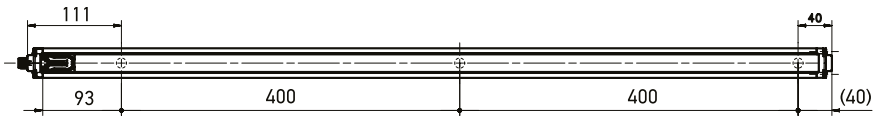
MECHANICAL DRAWINGS

SG*-**-050-PP-*



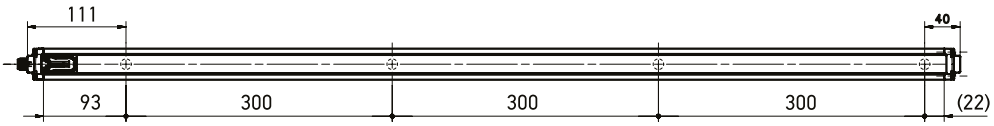
(mm)

SG*-**-080-PP-*



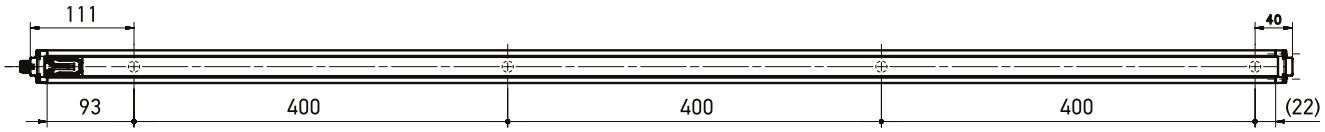
(mm)

SG*-**-090-PP-*



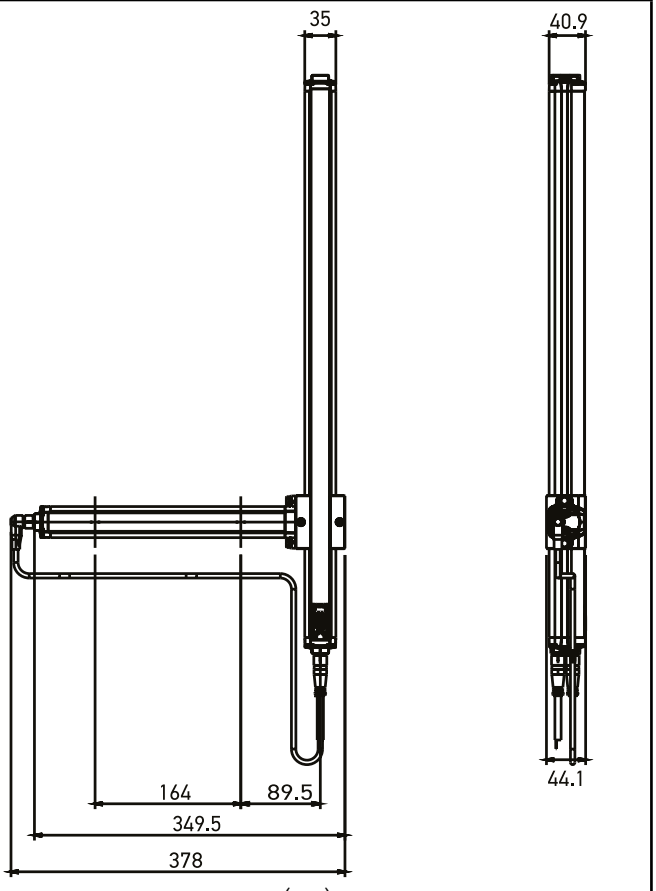
(mm)

SG*-**-120-PP-*



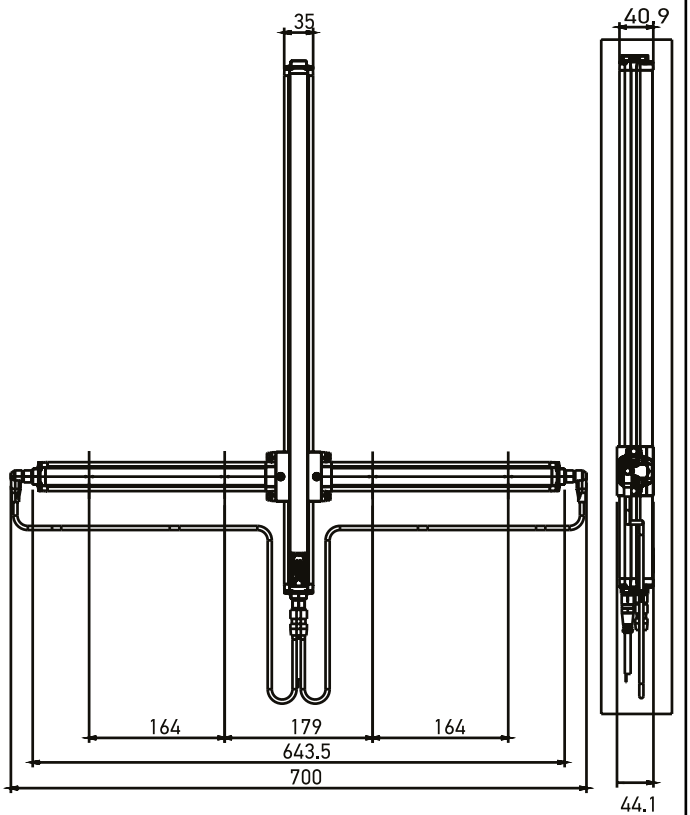
(mm)

SG*-L*-***-PP-W SG BODY COMPACT BASE \ MUTING + L arm



(mm)

SG*-T*-***-PP-W SG BODY COMPACT BASE \ MUTING + T arm



(mm)

ACCESSORIES

	Model	Description	Article code
Cables	CV-A1-22-B-03	Cable M12 4 poles axial female shielded 3m	95ACC1480
	CV-A1-22-B-05	Cable M12 4 poles axial female shielded 5m	95ACC1490
	CV-A1-22-B-10	Cable M12 4 poles axial female shielded 10m	95ACC1500
	CV-A1-22-B-15	Cable M12 4 poles axial female shielded 15m	95ACC2070
	CV-A1-22-B-25	Cable M12 4 poles axial female shielded 25m	95ACC2090
	CV-A1-26-B-03	Cable M12 8 poles axial female shielded 3m	95ACC1510
	CV-A1-26-B-05	Cable M12 8 poles axial female shielded 5m	95ACC1520
	CV-A1-26-B-10	Cable M12 8 poles axial female shielded 10m	95ACC1530
	CV-A1-26-B-15	Cable M12 8 poles axial female shielded 15m	95ACC2080
	CV-A1-26-B-25	Cable M12 8 poles axial female shielded 25m	95ACC2100
Connection boxes	SG-SRT-1	Muting connection box with forcibly guided relays 2NO start pushbutton override key selector	95ASE2050
	SG-SRT-2	Muting connection box with forcibly guided relays 2NO start pushbutton override key selector muting lamp	95ASE2060
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mirrors brackets	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-KSTD (30 pcs)	Metal angled brackets Box 30 x 4 pcs	95ASE2800
	ST-K4ROT-SG	Metal top-bottom rotative brackets 4 pcs kit for SG BODY COMPACT	95ASE2040
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-K4AV (30 pcs)	Anti vibration supports Box 30 x 4 pcs	95ASE2770
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
Muting lamps	LMS-1	Modular muting lamp	95ACC1990
	LMS-2	Muting lamp horizontal fixing	95ACC2000
	LMS-3	Muting lamp vertical fixing	95ACC2010
	LMS	Muting lamp	95ASE1830
Protective stands	SG-PSM-3-800	Protective stand with 3 adjustable mirrors h=800mm	95ASE2310
	SG-PSM-4-900	Protective stand with 4 adjustable mirrors h=900mm	95ASE2320
	SG-PSM-4-1200	Protective stand with 4 adjustable mirrors h=1200mm	95ASE2330
	SG-PSM-2-500	Protective stand with 2 adjustable mirrors h=500mm	95ASE2300
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
Protective stands brackets kit	ST-PS4-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 4 brackets	95ASE1750
	ST-PS6-SG-SE	SG-PSB protective stand mounting kit for SG/SH4 6 brackets	95ASE1760

ACCESSORIES

	Model	Description	Article code
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010
Safety units	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Vertical supports	SE-S-1000	Column for light curtains and floor stand h=1000 mm	95ACC1740
	SE-S-1200	Column for light curtains and floor stand h=1200 mm	95ACC1750
	SE-S-1500	Column for light curtains and floor stand h=1500 mm	95ACC1760
	SE-S-1800	Column for light curtains and floor stand h=1800 mm	95ACC1770
	SE-S-800	Column for light curtains and floor stand h=800 mm	95ACC1730

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges

WEBSITE

SG BODY
BIG BASE / MUTING
ROBUST TYPE 2 AND TYPE 4 SAFETY LIGHT GRID FOR BODY AND ARM DETECTION



Safety light curtain with robuts housing and long operating range, ideal for harsh environments and perimeter control. Access control is eased by integrated muting and override functions. Integrated muting lamp.

- Robust housing for harsh environments
- Long operating range for perimeter control
- Rapid solution for access control with muting
- Easy installation and alignment

- 2, 3, 4 beams for body protection
- 40 mm resolution for arm protection and presence detection
- Controlled heights 500, 800, 900 and 1200 mm
- Long operating distance: up to 60 m
- Simple configuration through DIP switches
- Integrated muting lamp (only muting models)
- Anti-interference coding
- External muting enable signal
- Edged or triggered muting dependent override

SAFETY TYPE 2 SAFETY TYPE 4

CODE DESCRIPTION

SG 2 - B2 - 050 - 00 - E

serie	**SG**	SG Body Big Base / Muting
type	**2**	Type 2
	4	Type 4
beams and range	**B2**	2 Beams
	B3	3 Beams
	B4	4 Beams
	BSR2	2 Beams Short Range (only type 4)
	BSR3	3 Beams Short Range (only type 4)
	BSR4	4 Beams Short Range (only type 4)
	BLR2	2 Beams Long Range (only type 4)
	BLR3	3 Beams Long Range (only type 4)
	BLR4	4 Beams Long Range (only type 4)
monitored height	**050**	500 mm (2 beams)
	080	800 mm (3 bams)
	090	900 mm (4 beams)
	120	1200 mm (4 beams)
output	**00**	
version	**E**	Base: without muting function
	W-C	Muting: with integrated muting function

TECHNICAL SPECIFICATIONS

	SG2-B2-***-00-*	SG2-B3-***-00-*	SG2-B4-090-00-*	SG2-B4-120-00-*
		SAFETY TYPE 2		
GENERAL DATA				
Operating principle	Emitter + Receiver			
Detection capability	500 mm	400 mm	300 mm	
MONITORED AREA				
Nominal sensing distance	0.5 ... 60 m			
Controlled height	500 mm	800 mm	900 mm	1200 mm
EMISSION DATA				
Emission	Infrared LED (950nm)			
Effective beam angle	≤ ±5 °			
FUNCTIONS				
Available functions	Manual/Automatic Restart, EDM (SG*-B*-***-00-E), Manual/Automatic Restart, EDM, L/T Muting, Override, Muting Enable, Muting Filter, Anti-Interference Coding (SG*-B***-***-00-W-C)			
SAFETY PARAMETERS				
Type	2			
Pl	e			
SIL	SIL 3 (IEC 61508)			
INPUT/OUTPUT				
Output type	2 x PNP (OSSD safety output) with EDM			
ELECTRICAL DATA				
Supply voltage	24 Vdc ±20%			
Power consumption - Emitter	≤ 2.5 W			
Power consumption - Receiver	≤ 4 W without load			
Maximum DC load current	500 mA each output			
Capacitive load tolerated	≥ 2.2 µF			
MECHANICAL DATA				
Dimensions	52 x 56.9 x (500) mm	52 x 56.9 x (800) mm	52 x 56.9 x (900) mm	52 x 56.9 x (1200) mm
Material	Painted aluminum / PMMA / PBT Valox 508			
Connections	M12-5 poles (emitter) M12-8 poles (receiver) (SG*-**-***-00-E), M12-5 poles + M12-5 poles (emitter) M12-12 poles + M12-5 poles (receiver) (SG*-B***-***-00-W-C)			
Length of cables (Power)	≤ 70 m			
CERTIFICATIONS				
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)			
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)			
Electromagnetic compatibility	IEC EN 60947-5-2			
ENVIRONMENTAL DATA				
Operating Temperature	0 ... 55 °C			
Storage temperature max.	-25 ... 70 °C			
Mechanical Protection	IP65			
Humidity	15 ... 95 % no condensation			
Ambient light immunity	According to IEC 61496-2			

TECHNICAL SPECIFICATIONS

	SG4-B2-***-00-*	SG4-B3-***-00-*	SG4-B4-090-00-*	SG4-B4-120-00-*
		SAFETY TYPE 4		
GENERAL DATA				
Operating principle	Emitter + Receiver			
Detection capability	500 mm	400 mm	300 mm	
MONITORED AREA				
Nominal sensing distance	0.5 ... 60 m			
Controlled height	500 mm	800 mm	900 mm	1200 mm
EMISSION DATA				
Emission	Infrared LED (950nm)			
Effective beam angle	≤ ±2.5 °			
FUNCTIONS				
Available functions	Manual/Automatic Restart, EDM (SG*-B*-***-00-E), Manual/Automatic Restart, EDM, L/T Muting, Override, Muting Enable, Muting Filter, Anti-Interference Coding (SG*-B***-***-00-W-C)			
SAFETY PARAMETERS				
Type	4			
Pl	e			
SIL	SIL 3 (IEC 61508)			
INPUT/OUTPUT				
Output type	2 x PNP (OSSD safety output) with EDM			
ELECTRICAL DATA				
Supply voltage	24 Vdc ±20%			
Power consumption - Emitter	≤ 2.5 W			
Power consumption - Receiver	≤ 4 W without load			
Maximum DC load current	500 mA each output			
Capacitive load tolerated	≥ 2.2 µF			
MECHANICAL DATA				
Dimensions	52 x 56.9 x (500) mm	52 x 56.9 x (800) mm	52 x 56.9 x (900) mm	52 x 56.9 x (1200) mm
Material	Painted aluminum / PMMA / PBT Valox 508			
Connections	M12-5 poles (emitter) M12-8 poles (receiver) (SG*-**-***-00-E), M12-5 poles + M12-5 poles (emitter) M12-12 poles + M12-5 poles (receiver) (SG*-B***-***-00-W-C)			
Length of cables (Power)	≤ 70 m			
CERTIFICATIONS				
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)			
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)			
Electromagnetic compatibility	IEC EN 60947-5-2			
ENVIRONMENTAL DATA				
Operating Temperature	0 ... 55 °C			
Storage temperature max.	-25 ... 70 °C			
Mechanical Protection	IP65			
Humidity	15 ... 95 % no condensation			
Ambient light immunity	According to IEC 61496-2			

AVAILABLE MODELS

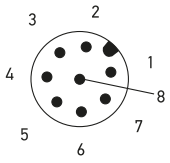
	SG4-40-***-00-E
	SAFETY TYPE 4
GENERAL DATA	
Operating principle	Emitter + Receiver
Detection capability	40 mm
MONITORED AREA	
Nominal sensing distance	6 ... 60 m
Controlled height	600 ... 1200 mm
EMISSION DATA	
Emission	Infrared LED (950nm)
Effective beam angle	≤ ±2.5 °
FUNCTIONS	
Available functions	Manual/Automatic Restart, EDM (SG*-B*-***-00-E)
SAFETY PARAMETERS	
Type	4
Pl	e
SIL	SIL 3 (IEC 61508)
INPUT/OUTPUT	
Output type	2 x PNP (OSSD safety output) with EDM
ELECTRICAL DATA	
Supply voltage	24 Vdc ±20%
Power consumption - Emitter	≤ 2.5 W
Power consumption - Receiver	≤ 4 W without load
Maximum DC load current	500 mA each output
Capacitive load tolerated	≥ 2.2 µF
MECHANICAL DATA	
Dimensions	52 x 56.9 x (600 ... 1200) mm
Material	Painted aluminum / PMMA / PBT Valox 508
Connections	M12-5 poles (emitter) M12-8 poles (receiver) (SG*-**-***-00-E)
Length of cables (Power)	≤ 50 m
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
Electromagnetic compatibility	IEC EN 60947-5-2
ENVIRONMENTAL DATA	
Operating Temperature	0 ... 55 °C
Storage temperature max.	-25 ... 70 °C
Mechanical Protection	IP65
Humidity	15 ... 95 % no condensation
Ambient light immunity	According to IEC 61496-2

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time max	Model
2	Body protection 2 beams 500 mm	0.5 ... 60 m	500 mm	2	12 ms	**SG2-B2-050-OO-E** (957851240)
	Body protection 2 beams muting 500 mm					**SG2-B2-050-OO-W-C** (957851320)
	Body protection 3 beams 400 mm		800 mm	3	13 ms	**SG2-B3-080-OO-E** (957851250)
	Body protection 3 beams muting 400 mm					**SG2-B3-080-OO-W-C** (957851330)
	Body protection 4 beams 300 mm		900 mm	4	14 ms	**SG2-B4-090-OO-E** (957851260)
	Body protection 4 beams muting 300 mm					**SG2-B4-090-OO-W-C** (957851340)
	Body protection 4 beams 300 mm		1200 mm			**SG2-B4-120-OO-E** (957851270)
	Body protection 4 beams muting 300 mm					**SG2-B4-120-OO-W-C** (957851350)
4	Body protection 2 beams 500 mm		500 mm	2	12 ms	**SG4-B2-050-OO-E** (957851280)
	Body protection 2 beams muting 500 mm					**SG4-BLR2-050-OO-W-C** (957851360)
						SG4-BSR2-050-OO-W-C (957851400)
	Body protection 3 beams 400 mm		800 mm	3	13 ms	**SG4-B3-080-OO-E** (957851290)
	Body protection 3 beams muting 400 mm					**SG4-BLR3-080-OO-W-C** (957851370)
						SG4-BSR3-080-OO-W-C (957851410)
	Body protection 4 beams 300 mm		900 mm	4	14 ms	**SG4-B4-090-OO-E** (957851300)
	Body protection 4 beams muting 300 mm					**SG4-BLR4-090-OO-W-C** (957851380)
						SG4-BSR4-090-OO-W-C (957851420)
	Body protection 4 beams 300 mm		1200 mm			**SG4-B4-120-OO-E** (957851310)
	Body protection 4 beams muting 300 mm					**SG4-BLR4-120-OO-W-C** (957851390)
						SG4-BSR4-120-OO-W-C (957851430)
	Arm protection res. 40 mm	6 ... 60 m	600 mm	33	21 ms	**SG4-40-060-OO-E** (957851570)
			900 mm	48	24 ms	**SG4-40-090-OO-E** (957851580)
			1200 mm	63	27 ms	**SG4-40-120-OO-E** (957851590)

CONNECTIONS

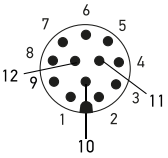
SG*-**-***-00-E (Receiver)



MALE
M12
8 pins

1	White	RESTART/RESET/RESTART MODE
2	Brown	24Vdc
3	Green	EDM ENABLE
4	Yellow	EDM
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	EARTH

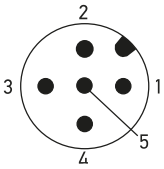
SG*-****-***-00-W-C (Receiver)



MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	RESET/RESTART/RE-START MODE
4	Green	OVERRIDE1
5	Pink	OSSD2
6	Yellow	EDM
7	Black	MUTING ENABLE
8	Gray	OSSD1
9	Red	OVERRIDE2
10	Violet	LAMP OUTPUT
11	Gray /Pink	OVERRIDE STATUS
12	Red/ Blue	EARTH

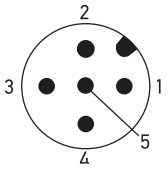
SG*-****-***-00-W-C (Emitter)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	TEST
3	Blue	0 V
4	Black	EARTH
5	Gray	NOT USED

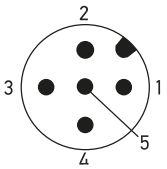
SG*-****-***-00-W-C (Receiver)



MALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	NOT USED

SG*-****-***-00-W-C (Receiver)

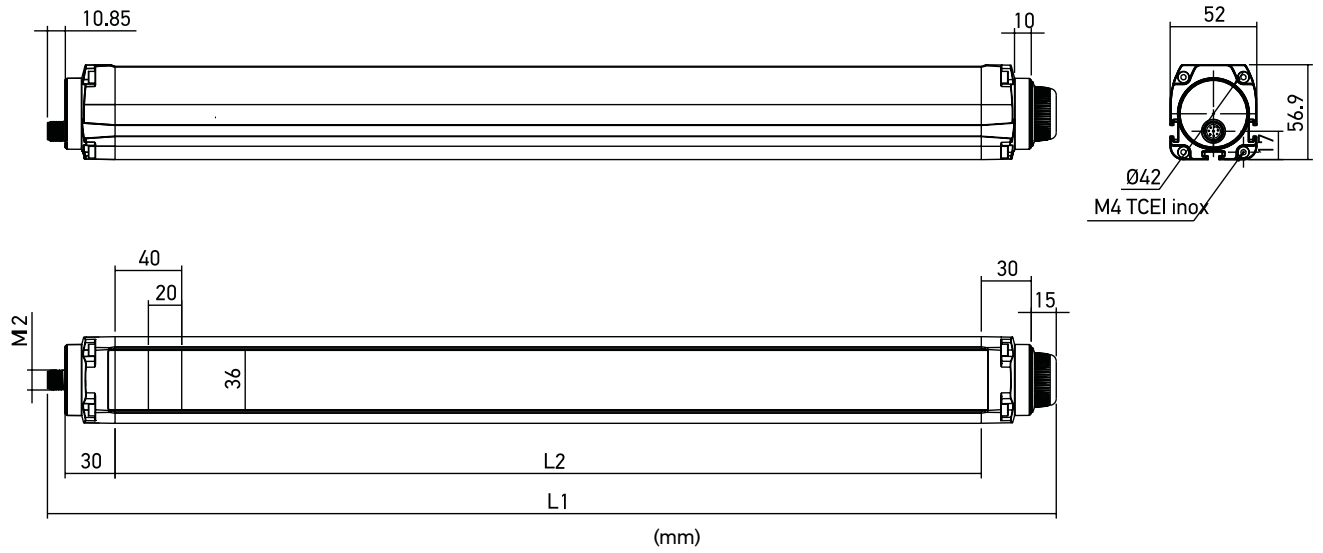


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	NOT USED
5	Gray	NOT USED

MECHANICAL DRAWINGS

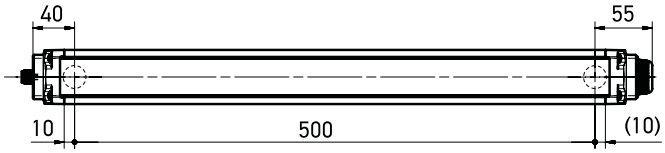
SG*-B***-***-00-*-*



(mm)

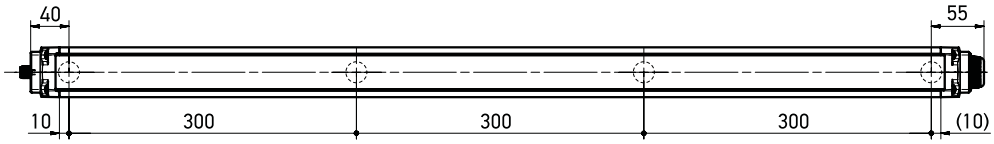
Models	L1	L2
SG*-B2-050-00-E	606.35	520.5

SG4-B2-050-00-*-*



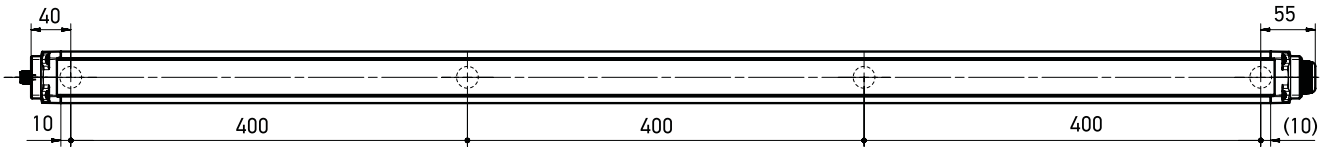
((mm)

SG4-B4-090-00-E



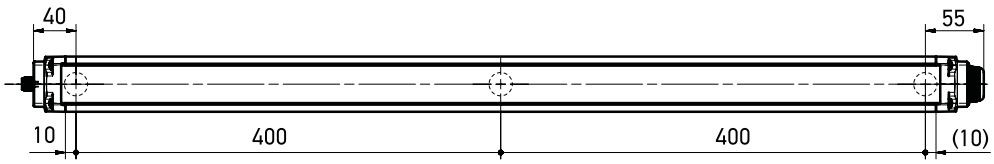
(mm)

SG4-B4-120-00-E



(mm)

SG4-B3-080-00-E



(mm)

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-10-U-03	Cable M12 12 poles axial female unshielded 3m UL 2464	95A252720
	CS-A1-10-U-05	Cable M12 12 poles axial female unshielded 5m UL 2464	95A252730
	CS-A1-10-U-10	Cable M12 12 poles axial female unshielded 10m UL 2464	95A252740
	CS-A1-10-U-15	Cable M12 12 poles axial female unshielded 15m UL 2464	95A252750
	CS-A1-10-U-25	Cable M12 12 poles axial female unshielded 25m UL 2464	95A252760
	CS-A1-10-U-50	Cable M12 12 poles axial female unshielded 50m UL 2464	95A252770
Connection boxes	SG-SRT-1	Muting connection box with forcibly guided relays 2NO start pushbutton over-ride key selector	95ASE2050
	SG-SRT-2	Muting connection box with forcibly guided relays 2NO start pushbutton over-ride key selector muting lamp	95ASE2060
Control units	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mirrors	SG-DM-150	Deviating mirror for light curtains h=150mm	95ASE1670
	SG-DM-600	Deviating mirror for light curtains h=600mm	95ASE1680
	SG-DM-900	Deviating mirror for light curtains h=900mm	95ASE1690
	SG-DM-1200	Deviating mirror for light curtains h=1200mm	95ASE1700
	SG-DM-1650	Deviating mirror for light curtains h=1650mm	95ASE1710
	SG-DM-1900	Deviating mirror for light curtains h=1900mm	95ASE1720
Mounting brackets	ST-K4ROT-SG BODY BIG	Metal top-bottom rotative brackets 4 pcs kit for SG BODY BIG	95ASE1960
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K4AV (30 pcs)	Anti vibration supports Box 30 x 4 pcs	95ASE2770
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
Muting lamps	LMS	Muting lamp	95ASE1830
	LMS-1	Modular muting lamp	95ACC1990
	LMS-2	Muting lamp horizontal fixing	95ACC2000
	LMS-3	Muting lamp vertical fixing	95ACC2010
Protective stands	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2240
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2250
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2260
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2270
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2280
	SG-PSM-2-500	Protective stand with 2 adjustable mirrors h=500mm	95ASE2300
	SG-PSM-3-800	Protective stand with 3 adjustable mirrors h=800mm	95ASE2310
	SG-PSM-4-900	Protective stand with 4 adjustable mirrors h=900mm	95ASE2320
	SG-PSM-4-1200	Protective stand with 4 adjustable mirrors h=1200mm	95ASE2330
Protective stands brackets kit	ST-DM	Deviating mirrors SG-DM mounting kit on SE-S columns	95ASE1940
	ST-PS-DM	SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	95ASE1770

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges

WEBSITE

SG BODY REFLECTOR BASE / MUTING

RETROREFLECTIVE TYPE 4 SAFETY LIGHT GRID FOR BODY DETECTION



Sturdy safety light curtain for body protection with only one active side. Access control is eased by integrated muting and override functions. Integrated muting lamp.

- One active and one passive unit to reduce wiring and installation costs
- Robust housing for harsh environments
- Easy installation and alignment
- Reflective muting arms included in L and T muting version
- All advanced features associated to muting function
- 2, 3, 4 beams for body protection
- Controlled heights 500, 800, 900 and 1200 mm
- Up to 8 m operating distance
- Simple configuration through DIP switches
- Integrated muting lamp (muting models)
- Anti-interference coding
- External muting enable signal
- Edged or triggered muting dependent override

CODE DESCRIPTION

SG 4 - RB 2 - L - 050 - E

serie	**SG**	SG Body reflector base/muting
type	**4**	Type 4
active/passive unit	**RB**	Active Unit
	RDB	Passive Unit
beams and range	**2**	2 beams
	3	3 beams
	4	4 beams
muting arms		Linear version-no muting arms included
	L	L muting arms included
	T	T muting arms included
monitored height	**050**	500 mm (2 beams)
	080	800 mm (3 beams)
	090	900 mm (4 beams)
	120	1200 mm (4 beams)
version	**E**	Base: without integrated muting function
	W	Muting: with integrated muting function
	N	SG4-N Body Reflector Muting: muting function with single main connector

TECHNICAL SPECIFICATIONS

	SG4-RB2-***-00-*	SG4-RB2L/T-***-00 -W	SG4-RB3-***-00-*	SG4-RB3L/T-***-00 -W
GENERAL DATA				
Operating principle	Transceiver (Active side)			
Detection capability	500 mm		400 mm	
MONITORED AREA				
Nominal sensing distance	0.5 ... 8 m	0.5 ... 3 m	0.5 ... 8 m	0.5 ... 3 m
Controlled height	500 mm		800 mm	
EMISSION DATA				
Emission	Infrared LED (950nm)			
Effective beam angle	≤ ±2.5 °			
FUNCTIONS				
Available functions	Manual/Automatic Restart, EDM, Active Unit (SG4-RB*-***-00-E), Manual/ Automatic Restart, EDM, L/T Muting, Override (SG4-RB*-***-00-N), Manual/ Automatic Restart, EDM, Muting, Override, Muting Enable, Muting Filter (SG4-RB*-***-00-W)	Manual/Automatic Restart, EDM, Muting, Override, Muting Enable, Muting Filter (SG4-RB*-***-00-W)	Manual/Automatic Restart, EDM, Active Unit (SG4-RB*-***-00-E), Manual/ Automatic Restart, EDM, L/T Muting, Override (SG4-RB*-***-00-N), Manual/ Automatic Restart, EDM, Muting, Override, Muting Enable, Muting Filter (SG4-RB*-***-00-W)	Manual/Automatic Restart, EDM, Muting, Override, Muting Enable, Muting Filter (SG4-RB*-***-00-W)
Included accessories		Active sensor single arm SG-AS-ARM for L muting (SG4-RB*L-***-00-W), Two active sensor single arms SG-AS-ARM for T muting (SG4-RB*T-***-00-W)		Active sensor single arm SG-AS-ARM for L muting (SG4-RB*L-***-00-W), Two active sensor single arms SG-AS-ARM for T muting (SG4-RB*T-***-00-W)
SAFETY PARAMETERS				
Type	4			
Pl	e			
SIL	SIL 3 (IEC 61508)			
INPUT/OUTPUT				
Output type	2 x PNP (OSSD safety output) with EDM			
ELECTRICAL DATA				
Supply voltage	24 Vdc ±20%			
Power consumption - Receiver	≤ 6.5 W without load			
Maximum DC load current	500 mA each output			
MECHANICAL DATA				
Dimensions	52 x 56.9 x (606.35) mm		52 x 56.9 x (906.35) mm	
Material	Painted aluminum / PMMA / PBT Valox 508			
Connections	M12-12 poles + M12-5 poles (Active Unit) (SG4-RB**-***-00-W), M12-8 poles (Active Unit) (SG4-RB*-***-00-E/N)	M12-12 poles + M12-5 poles (Active Unit) (SG4-RB**-***-00-W)	M12-12 poles + M12-5 poles (Active Unit) (SG4-RB**-***-00-W), M12-8 poles (Active Unit) (SG4-RB*-***-00-E/N)	M12-12 poles + M12-5 poles (Active Unit) (SG4-RB**-***-00-W)
Length of cables (Power)	≤ 70 m			
CERTIFICATIONS				
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)			
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)			
Electromagnetic compatibility	IEC EN 60947-5-2			
ENVIRONMENTAL DATA				
Operating Temperature	0 ... 55 °C			
Storage temperature max.	-25 ... 70 °C			
Mechanical Protection	IP65			
Humidity	15 ... 95 % no condensation			
Ambient light immunity	According to IEC 61496-2			

TECHNICAL SPECIFICATIONS

	SG4-RB4-090-00-*	SG4-RB4-120-00-*
		
GENERAL DATA		
Operating principle	Transceiver (Active side)	
Detection capability	300 mm	
MONITORED AREA		
Nominal sensing distance	0.5 ... 6.5 m	0.5 ... 8 m
Controlled height	900 mm	1200 mm
EMISSION DATA		
Emission	Infrared LED (950nm)	
Effective beam angle	≤ ±2.5 °	
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM, Active Unit (SG4-RB*-***-00-E), Manual/Automatic Restart, EDM, L/T Muting, Override (SG4-RB*-***-00-N), Manual/Automatic Restart, EDM, Muting, Override, Muting Enable, Muting Filter (SG4-RB*-***-00-W)	
SAFETY PARAMETERS		
Type	4	
Pl	e	
SIL	SIL 3 (IEC 61508)	
INPUT/OUTPUT		
Output type	2 x PNP (OSSD safety output) with EDM	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Power consumption - Receiver	≤ 6.5 W without load	
Maximum DC load current	500 mA each output	
MECHANICAL DATA		
Dimensions	52 x 56.9 x (1006.35) mm	52 x 56.9 x (1306.35 ... 1309.35) mm
Material	Painted aluminum / PMMA / PBT Valox 508	
Connections	M12-12 poles + M12-5 poles (Active Unit) (SG4-RB**-***-00-W), M12-8 poles (Active Unit) (SG4-RB*-***-00-E/N)	
Length of cables (Power)	≤ 70 m	
CERTIFICATIONS		
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)	
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)	
Electromagnetic compatibility	IEC EN 60947-5-2	
ENVIRONMENTAL DATA		
Operating Temperature	0 ... 55 °C	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP65	
Humidity	15 ... 95 % no condensation	
Ambient light immunity	According to IEC 61496-2	

TECHNICAL SPECIFICATIONS

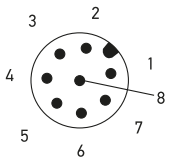
	SG4-RDB2*	SG4-RDB3*	SG4-RDB4-090	SG4-RDB4-120
GENERAL DATA				
Operating principle	Passive side			
Detection capability	500 mm	400 mm	300 mm	
MONITORED AREA				
Controlled height	500 mm	800 mm	900 mm	1200 mm
EMISSION DATA				
Effective beam angle	≤ ±2.5 °			
FUNCTIONS				
Available functions	Passive Unit			
Included accessories	Passive sensor single arm SG-PR-ARM for L muting (SG4-RDB*L), Two Passive sensor single arms SG-PR-ARM for T muting (SG4-RDB*T)			
SAFETY PARAMETERS				
Type	4			
MECHANICAL DATA				
Dimensions	52 x 56.9 x (580.5) mm	52 x 56.9 x (880.5) mm	52 x 56.9 x (980.5) mm	52 x 56.9 x (1280.5) mm
Material	Painted aluminum / PMMA / PBT Valox 508			
CERTIFICATIONS				
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)			
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)			
Electromagnetic compatibility	IEC EN 60947-5-2			
ENVIRONMENTAL DATA				
Operating Temperature	0 ... 55 °C			
Storage temperature max.	-25 ... 70 °C			
Mechanical Protection	IP65			
Humidity	15 ... 95 % no condensation			
Ambient light immunity	According to IEC 61496-2			

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Controlled height	Beams number	Response time	Model
4	Body protection 2 beams 500 mm	0.5 ... 8 m	500 mm	2	11 ms	**SG4-RB2-050-OO-E** (957951000)
	Body protection 2 beams with muting 500 mm					**SG4-RB2-050-OO-N** (957951220)
						SG4-RB2-050-OO-W (957951030)
		0.5 ... 3 m				**SG4-RB2L-050-OO-W** (957951060)
						SG4-RB2T-050-OO-W (957951080)
	Body protection 3 beams 400 mm	0.5 ... 8 m	800 mm	3	12 ms	**SG4-RB3-080-OO-E** (957951010)
	Body protection 3 beams with muting 400 mm					**SG4-RB3-080-OO-N** (957951230)
						SG4-RB3-080-OO-W (957951040)
		0.5 ... 3 m	800 mm			**SG4-RB3L-080-OO-W** (957951070)
						SG4-RB3T-080-OO-W (957951090)
	Body protection 4 beams 300 mm	0.5 ... 6.5 m	900 mm	4		**SG4-RB4-090-OO-E** (957951190)
	Body protection 4 beams with muting 300 mm					**SG4-RB4-090-OO-N** (957951240)
						SG4-RB4-090-OO-W (957951180)
	Body protection 4 beams 300 mm	0.5 ... 8 m	1200 mm			**SG4-RB4-120-OO-E** (957951020)
	Body protection 4 beams with muting 300 mm					**SG4-RB4-120-OO-N** (957951250)
						SG4-RB4-120-OO-W (957951050)
	Body protection 2 beams 500 mm		500 mm	2		**SG4-RDB2** (957951100)
						SG4-RDB2L (957951130)
						SG4-RDB2T (957951150)
	Body protection 3 beams 400 mm		800 mm	3		**SG4-RDB3** (957951110)
						SG4-RDB3L (957951140)
						SG4-RDB3T (957951160)
	Body protection 4 beams 300 mm		900 mm	4		**SG4-RDB4-090** (957951170)
			1200 mm			**SG4-RDB4-120** (957951120)

CONNECTIONS

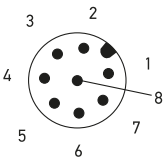
SG4-RB*-***-00-N (Receiver)



MALE
M12
8 pins

1	White	RESTART/RESET/EDM/ OVERRIDE
2	Brown	24Vdc
3	Green	MUTING1
4	Yellow	MUTING2
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	MUTING LAMP

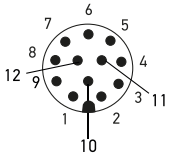
SG4-RB*-***-00-E (Receiver)



MALE
M12
8 pins

1	White	RESTART/RESET/RESTART MODE
2	Brown	24Vdc
3	Green	EDM ENABLE
4	Yellow	EDM
5	Grey	OSSD1
6	Pink	OSSD2
7	Blue	0Vdc
8	Red	EARTH

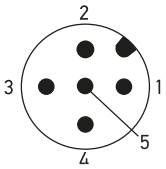
SG4-RB**-***-00-W (Receiver)



MALE
M12
12 pins

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	RESET/RESTART/RE-START MODE
4	Green	OVERRIDE1
5	Pink	OSSD2
6	Yellow	EDM
7	Black	MUTING ENABLE
8	Gray	OSSD1
9	Red	OVERRIDE2
10	Violet	LAMP OUTPUT
11	Gray /Pink	OVERRIDE STATUS
12	Red/ Blue	EARTH

SG4-RB**-***-00-W (Receiver)

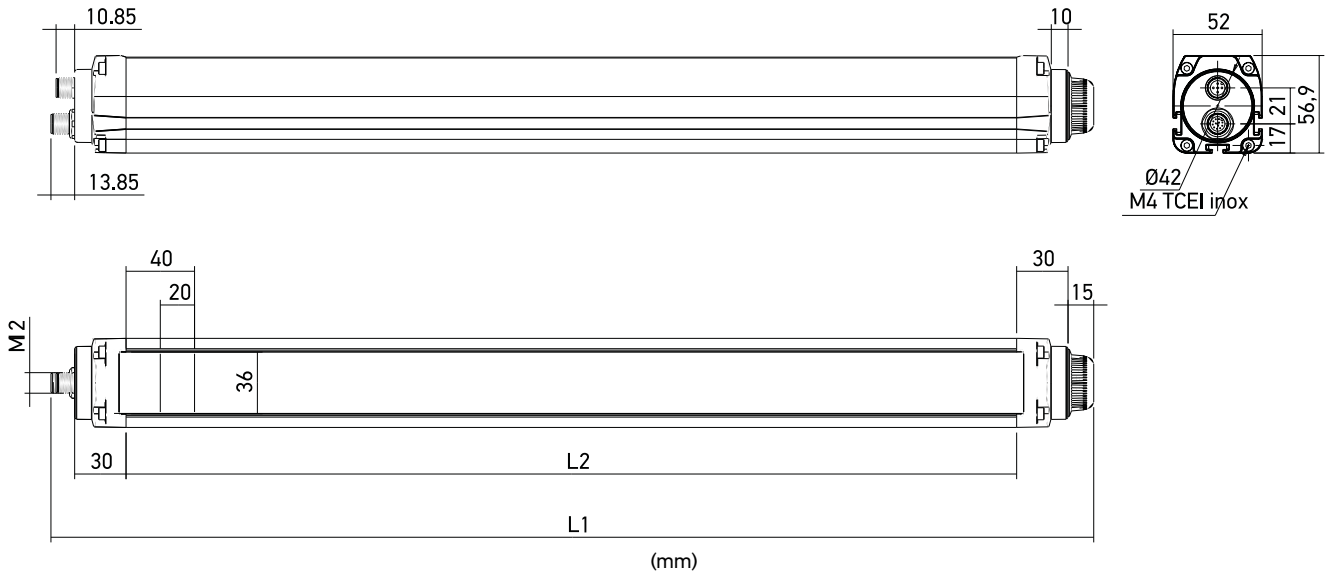


MALE
M12
5 pins

1	Brown	24 Vdc
2	White	MUTING2
3	Blue	0 V
4	Black	MUTING1
5	Gray	NOT USED

MECHANICAL DRAWINGS

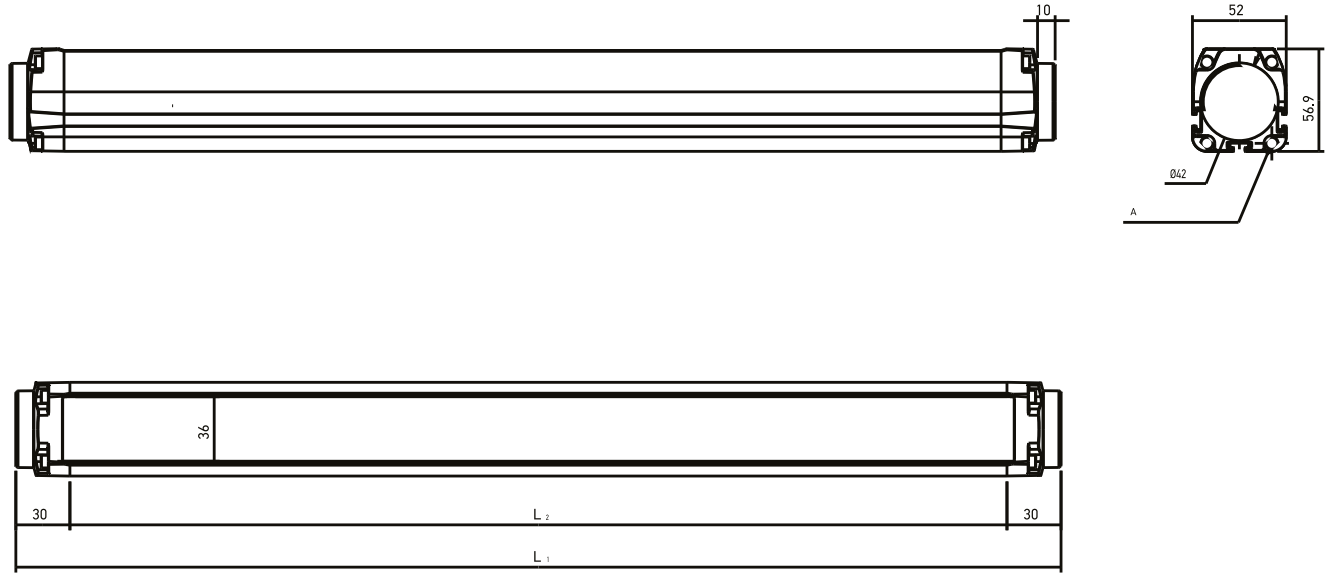
SG4-B*-***/SG4-RB* SG BODY REFLECTOR / MUTING active



(mm)

Models	H (mm)	L1 (mm)	L2 (mm)
SG4-B2-050/SG4-RB2	500	609.35	520.5
SG4-B3-080/SG4-RB3	800	909.35	820.5
SG4-B4-090/SG4-RB4	900	1009.35	920.5
SG4-B4-120/SG4-RB4	1200	1309.35	1220.5

SG4-RDB* SG4-RDB*

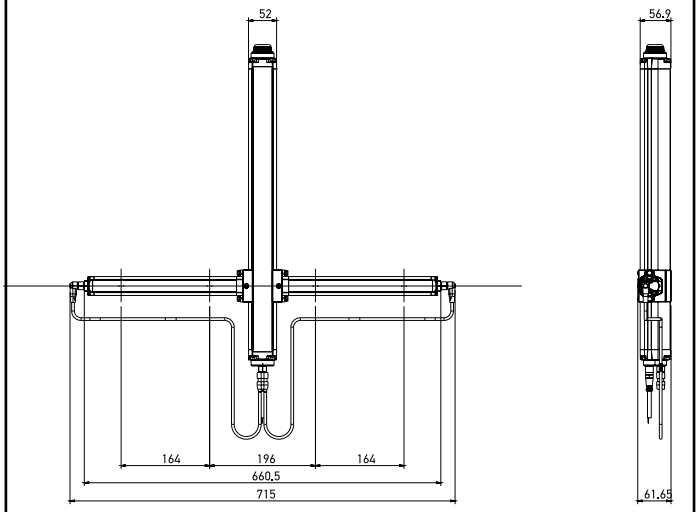


(mm)

Models	H (mm)	L1 (mm)	L2 (mm)	A
SG4-RDB2	500	580.5	520.5	M4 TCEI inox
SG4-RDB3	800	880.5	820.5	
SG4-RDB4-090	900	980.5	920.5	
SG4-RDB4-120	1200	1280.5	1220.5	

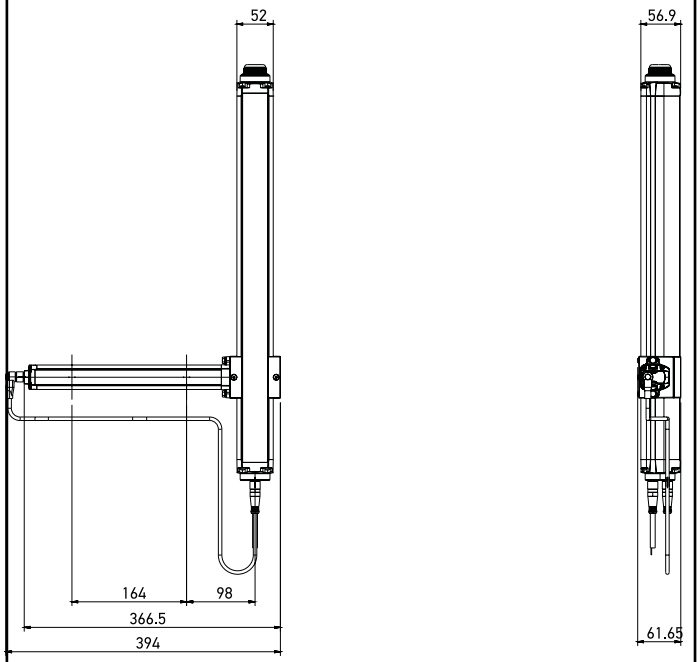
MECHANICAL DRAWINGS

SG4-B*-*/SG4-RB***
SG BODY REFLECTOR BASE WITH T MUTING ARMS - ACTIVE SIDE



(mm)

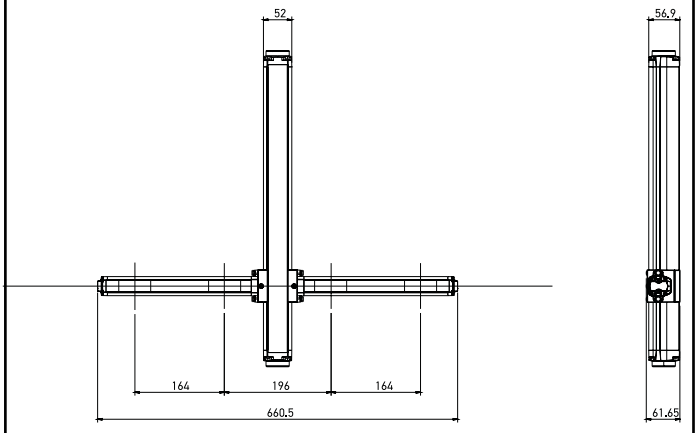
SG4-B*-*/SG4-RB***
SG BODY REFLECTOR BASE WITH L MUTING ARMS - ACTIVE SIDE



(mm)

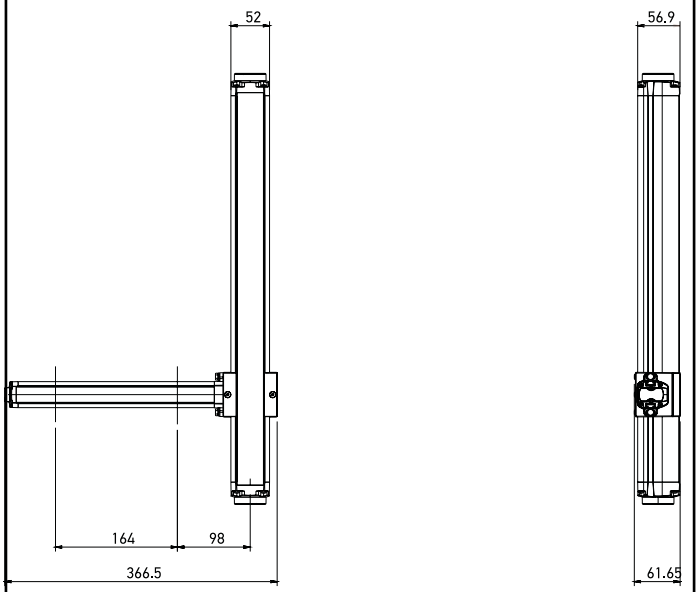
MECHANICAL DRAWINGS

SG4-RDB*
SG BODY REFLECTOR BASE WITH T MUTING ARMS - PASSIVE SIDE



(mm)

SG4-RDB*
SG BODY REFLECTOR BASE WITH L MUTING ARMS - PASSIVE SIDE



(mm)

ACCESSORIES TO BE ORDERED SEPARATELY

	Model	Description	Article code
Cables	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
	CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200
	CS-A1-03-U-25	Cable M12 5 poles axial female unshielded 25m UL 2464	95ASE1210
	CS-A1-03-U-50	Cable M12 5 poles axial female unshielded 50m UL 2464	95A252700
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-06-U-50	Cable M12 8 poles axial female unshielded 50m UL 2464	95A252710
	CS-A1-10-U-03	Cable M12 12 poles axial female unshielded 3m UL 2464	95A252720
	CS-A1-10-U-05	Cable M12 12 poles axial female unshielded 5m UL 2464	95A252730
	CS-A1-10-U-10	Cable M12 12 poles axial female unshielded 10m UL 2464	95A252740
	CS-A1-10-U-15	Cable M12 12 poles axial female unshielded 15m UL 2464	95A252750
	CS-A1-10-U-25	Cable M12 12 poles axial female unshielded 25m UL 2464	95A252760
	CS-A1-10-U-50	Cable M12 12 poles axial female unshielded 50m UL 2464	95A252770
Safety units	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
Laser pointers	SG-LP	Laser pointer for SG light curtains	95ASE5590
Mounting brackets	ST-K4STD-SG	Metal angled brackets 4 pcs kit for SG BODY BIG	95ASE1950
	ST-K4ROT-SG BODY BIG	Metal top-bottom rotative brackets 4 pcs kit for SG BODY BIG	95ASE1960
	ST-K4REAR-SG	Metal rear brackets 4 pcs kit for SG BODY BIG	95ASE1970
	ST-K4ROT-SG	Metal top-bottom rotative brackets 4 pcs kit for SG BODY COMPACT	95ASE2040
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-KP6MP	Plastic angled brackets 6 pcs kit	95ASE1110
Muting lamps	LMS	Muting lamp	95ASE1830
	LMS-1	Modular muting lamp	95ACC1990
	LMS-2	Muting lamp horizontal fixing	95ACC2000
	LMS-3	Muting lamp vertical fixing	95ACC2010
Protective stands	SG-P	Plate with springs for protective stands SG-PSB and SG-PSM	95ASE2290
	SG-PSB-600	Protective stand for light curtains h=600mm	95ASE2250
	SG-PSB-1000	Protective stand for light curtains h=1000mm	95ASE2260
	SG-PSB-1200	Protective stand for light curtains h=1200mm	95ASE2270
	SG-PSB-1650	Protective stand for light curtains h=1650mm	95ASE2280
	SG-PSB-1900	Protective stand for light curtains h=1900mm	95ASE2240
Protective stands brackets kit	ST-PS4-SG BODY	SG-PSB Protective stand mounting kit for SG BODY BIG 4 brackets	95ASE1730
	ST-PS6-SG BODY	SG-PSB protective stand mounting kit for SG BODY BIG 6 brackets	95ASE1740
Safety control units	SG-BWS-T4-MT	Safety control unit for S5 SL5 S300 safety sensors pl=e double muting 4 beams	957051010

NOTE : When using CS-ME, connect EDM input, and be sure EDM function is active on the safety light curtain.

DATASENSING
easing automation challenges



SAFETY SENSORS

S5 / SL5 ST

M18 TUBULAR SINGLE BEAM INFRARED AND LASER SAFETY SENSORS



Photoelectric tubular M18 safety sensor to be used in combination with safety units SG-BWS

- Emitter-receiver photocells with test input
- Visible red class 1 laser emission (SL5) or infrared LED emission (S5)
- Type 2 and Type 4 models
- Plastic M18 tubular format
- Up to 40m operating distance
- Standard M12 connectors

- Robots
- Automatic assembling lines
- Palletizers and Depalletizers

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S300-SG-ST

HEAVY DUTY SAFETY SENSOR FOR HARSH ENVIRONMENTS AND LONG DISTANCES.



Photoelectric safety sensor to be used in combination with safety units SG-BWS

- Emitter-receiver photocells with test input
- Type 2 and Type 4 models
- Standard M12 connectors
- Infrared emission
- Distances reaching 40 m, 50 m
- Plastic rectangular format

- Robots
- Automatic assembling lines
- Palletizers and Depalletizers

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SH/TH

SAFETY DEVICE



- M18 Models 10 m (axial optic) and 5 m (radial optic) operating distance
- M30 models 60 m operating distance
- EN50100 Category 2 and Category 4 compliant
- LED indicators
- Plastic and Metal Housing
- Inputs and Outputs IEC61131-2 compliant and adaptable with any safety module
- To be used together with a Category 2 or Category 4 safety control unit to obtain a safety system EN ISO 13849 compliant

- Robots
- Automatic assembling lines
- Palletizers and Depalletizers

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INTERACTIVE INDEX

DATASENSING
easing automation challenges

M18 IP67 WEBSITE

S5 / SL5 ST

M18 TUBULAR SINGLE BEAM INFRARED AND LASER SAFETY SENSORS



Photoelectric tubular M18 safety sensor to be used in combination with safety units SG-BWS

- Emitter-receiver photocells with test input
- Visible red class 1 laser emission (SL5) or infrared LED emission (S5)
- Type 2 and Type 4 models
- Plastic M18 tubular format
- Up to 40m operating distance
- Standard M12 connectors

CODE DESCRIPTION

S5 - 5 - G8-62 - SG - ST2

series	**S5**	M18 Photoelectric infrared sensor
	SL5	M18 Laser infrared sensor
supply type	**5**	10...30 Vdc
function	**G8-62**	Infrared emitter
	F8-92	Infrared receiver
	G-82	Laser emitter
	F-92	Laser receiver
safety connectivity	**SG**	to be used with SG-BWS safety unit
type	**ST2**	type 2
	ST4	type 4

TECHNICAL SPECIFICATIONS

	S5-5-*-*8-**-ST*
	
GENERAL DATA	
Operating principle	Emitter, Receiver
Control units to be used	SG-BWS-T4 Series
DETECTION CAPABILITIES	
Nominal sensing distance	0 ... 8 m
Controlled height	Single-beam
EMISSION DATA	
Emission	LED Infrared
Effective beam angle	≤ ±2.5 ° (S5-5-*8-**-SG-ST4), ≤ ±5 ° (S5-5-*8-**-SG-ST2)
SAFETY PARAMETERS	
Type	2 (S5-5-*8-*2-SG-ST2), 4 (S5-5-*8-*2-SG-ST4)
INPUT/OUTPUT	
Response time	1 ms
Output type	PNP
Output function	To be connected to SG-BWS-T4 Safety Control Unit Series
ELECTRICAL DATA	
Supply voltage	24 Vdc ±15%
Maximum No-load absorption	30mA
Maximum DC load current	100 mA
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing
Ground resistivity	500 Vac 1 min., between electronics and housing
MECHANICAL DATA	
Dimensions	M18x1 / L=73.5 mm
Housing material	PBT / PMMA
Active part material	PMMA
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
ENVIRONMENTAL DATA	
Operating Temperature	-25 ... 55 °C (Without freeze)
Mechanical Protection	IP67
Storage temperature max.	-25 ... 70 °C
Shocks and vibrations	IEC60068-2-6
Ambient light immunity	according to EN 60947-5-2 : 2020

TECHNICAL SPECIFICATIONS

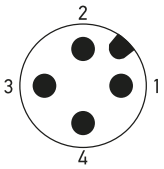
	SL5-5-*-**-SG-ST*
GENERAL DATA	
Operating principle	Emitter, Receiver
Control units to be used	SG-BWS-T4 Series
DETECTION CAPABILITIES	
Nominal sensing distance	0 ... 40 m
Controlled height	Single-beam
EMISSION DATA	
Emission	LASER Red
Effective beam angle	≤ ±2.5 ° (SL5-5-*-**-SG-ST4)
SAFETY PARAMETERS	
Type	4 (SL5-5-*-*2-SG-ST4)
INPUT/OUTPUT	
Response time	1 ms
Output type	PNP
Output function	To be connected to SG-BWS-T4 Safety Control Unit Series
ELECTRICAL DATA	
Supply voltage	24 Vdc ±15%
Maximum No-load absorption	35mA
Maximum DC load current	100 mA
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing
Ground resistivity	500 Vac 1 min., between electronics and housing
MECHANICAL DATA	
Dimensions	M18x1 / L=86 mm
Housing material	ABS / PMMA
Active part material	PMMA
CERTIFICATIONS	
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)
ENVIRONMENTAL DATA	
Operating Temperature	-10 ... 50 °C (Without freeze)
Mechanical Protection	IP67
Storage temperature max.	-25 ... 70 °C
Shocks and vibrations	IEC60068-2-6
Ambient light immunity	according to EN 60947-5-2 : 2020

AVAILABLE MODELS

Emission	Type	Nominal sensing distance	Housing material	Operating principle	Model
LED Infrared	2	0 ... 8 m	PBT / PMMA	Emitter	**S5-5-G8-62-SG-ST2** (952051870)
n/a				Receiver	**S5-5-F8-92-SG-ST2** (952051890)
LED Infrared	4			Emitter	**S5-5-G8-62-SG-ST4** (952051910)
n/a				Receiver	**S5-5-F8-92-SG-ST4** (952051930)
LASER Red		0 ... 40 m	ABS / PMMA	Emitter	**SL5-5-G-82-SG-ST4** (952501160)
n/a				Receiver	**SL5-5-F-92-SG-ST4** (952501170)

CONNECTIONS

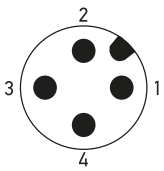
S*5-G*-*2-SG-ST*
(Emitter)



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	Test

S*5-5-F-92-SG-ST*
(Receiver)

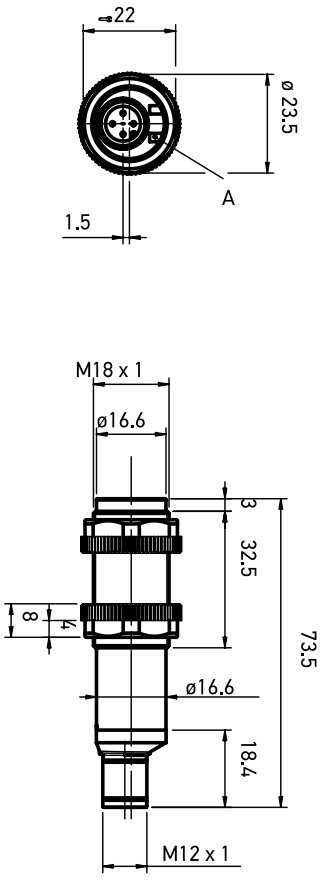


MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	PNP 100 mA

MECHANICAL DRAWINGS

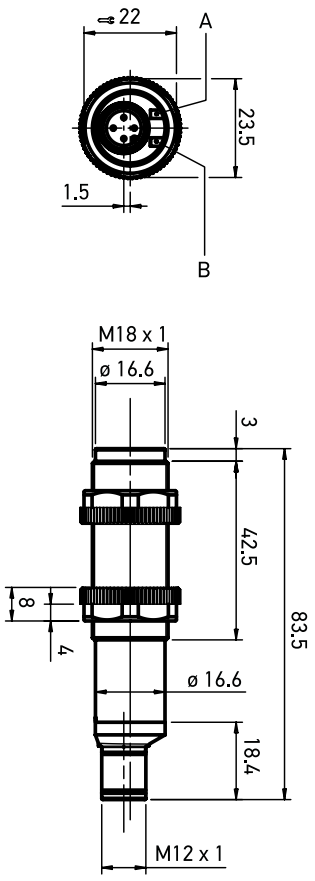
S5-5-G8-62-SG-ST2



(mm)

Model	A
S5-5-G8-62-SG-ST2	LED power on

S5-5-F8-92-SG-ST2

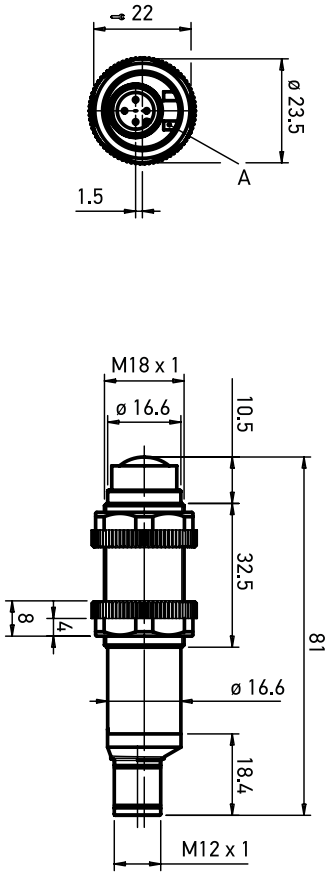


(mm)

Model	A	B
S5-5-F8-92-SG-ST2	LED stability	LED power on

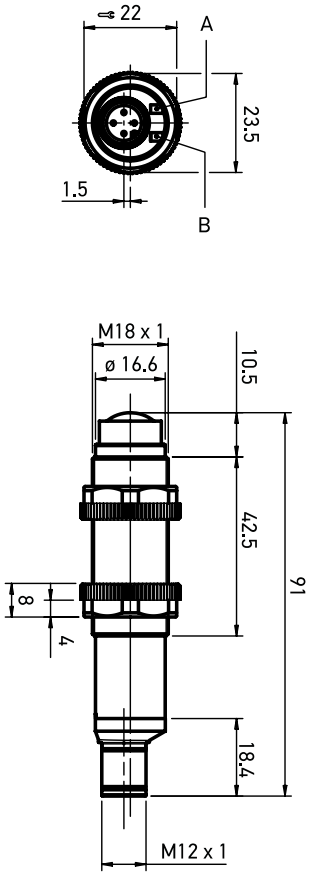
MECHANICAL DRAWINGS

S5-5-G8-62-SG-ST4



Model	A
S5-5-F8-92-SG-ST4	LED power on

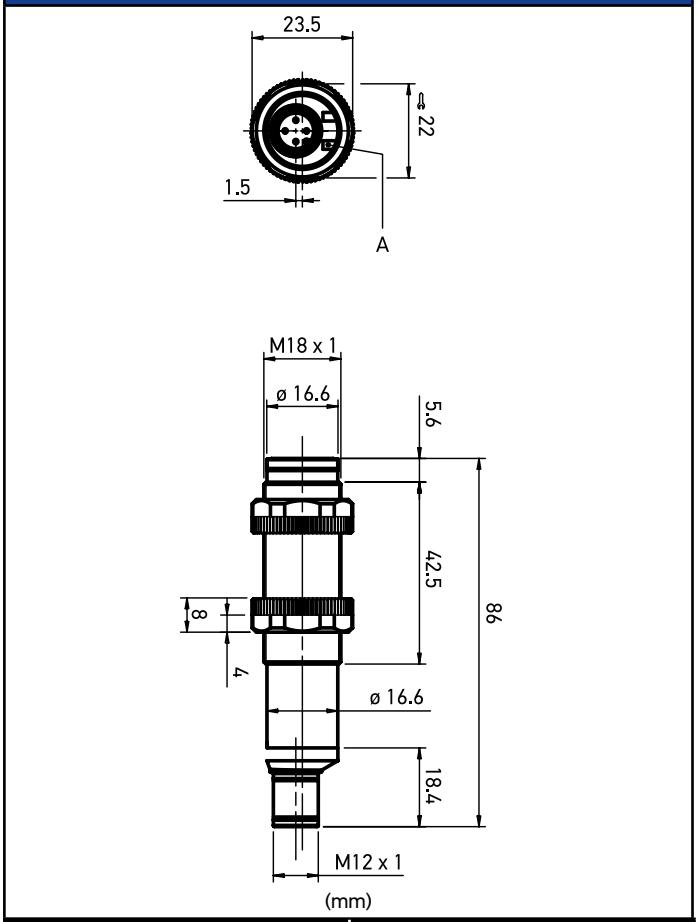
S5-5-F8-92-SG-ST4



Model	A	B
S5-5-F8-92-SG-ST4	LED stability	LED power on

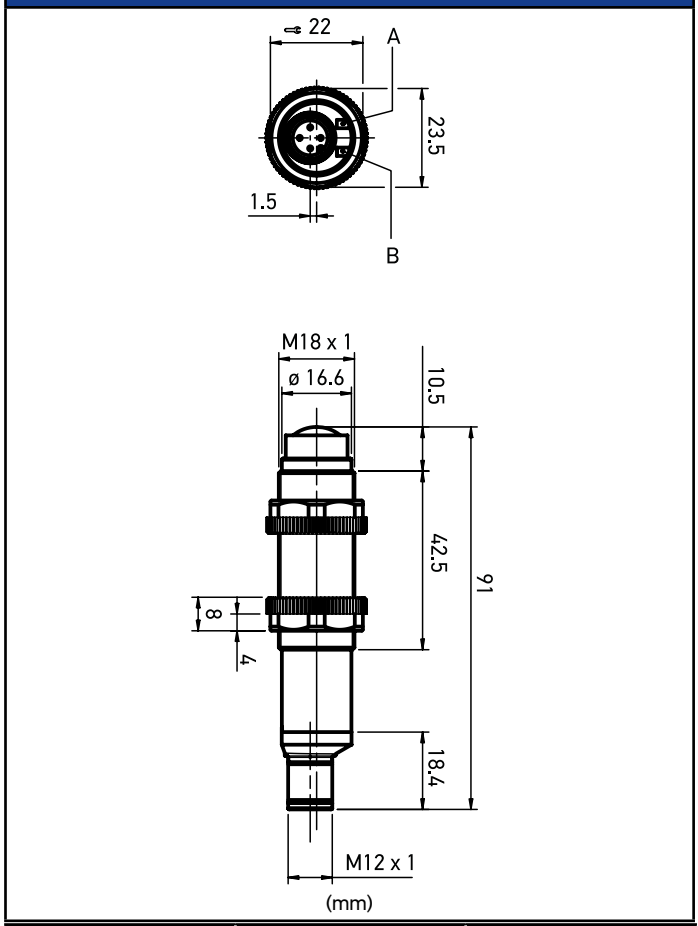
MECHANICAL DRAWINGS

SL5-5-G-82-SG-ST4



Model	A
SL5-5-G-82-SG-ST4	LED power on

SL5-5-F-92-SG-ST4



Model	A	B
SL5-5-F-92-SG-ST4	LED stability	LED power on

ACCESSORIES TO BE ORDERED SEPARATELY

	Model	Description	Article code
Mounting brackets	SP-40	SP-40 = Tubolar mounting bracket	95ACC1370
	ST 18-C	Bracket M18 90*	ST 18-C
	MICRO-18	MICRO-18 = M18 support with micrometric regulation for tubular M18 sensors	95ACC1380
	SWING-18	SWING-18 = adjustable support for M18 tubular sensors	895000006

DATASENSING
easing automation challenges

IP67

WEBSITE

S300-SG-ST

HEAVY DUTY SAFETY SENSOR FOR HARSH ENVIRONMENTS AND LONG DISTANCES.



Photoelectric safety sensor to be used in combination with safety units SG-BWS

- Emitter-receiver photocells with test input
- Type 2 and Type 4 models
- Standard M12 connectors
- Infrared emission
- Distances reaching 40 m, 50 m
- Plastic rectangular format

CODE DESCRIPTION

S300 - P R - 5 - G 0 0 - EX - M - SG - ST2

series	**S300**	Photoelectric sensor
housing	**P**	Plastic housing
emission	**R**	Radial LED emission
connector	**5**	M12-4pins round connector
optic function	**F**	Through Beam Receiver
	G	Through Beam Emitter
distance	**0**	Standard distance
adjustments	**0**	no adjustment
I/O type	**EX**	Emitter w/ TEST input (only DC)
	OC	Opto Coupled Output
defogging function	**...**	Absent
	M	Defogging
safety	**SG**	Safety sensor when connected with SG-BWS units
type	**ST2**	Type 2
	ST4	Type 4

TECHNICAL SPECIFICATIONS

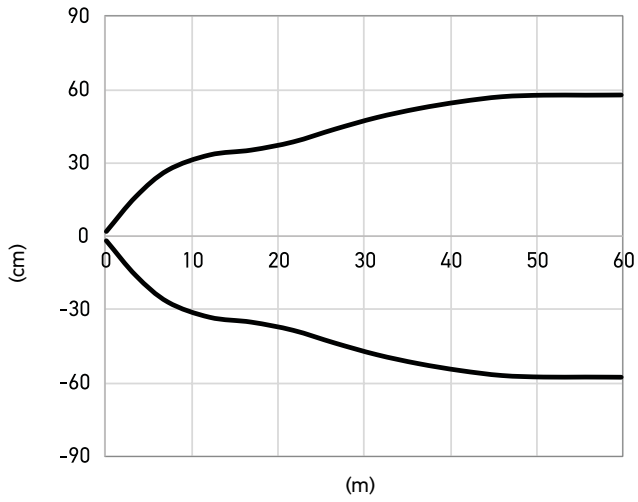
	S300-PR-5-F/G00-**-*-SG-ST2	S300-PR-5-F/G00-**-*-SG-ST4
		
GENERAL DATA		
Operating principle	Emitter, Receiver	
Control units to be used	SG-BWS-T4 Series	
DETECTION CAPABILITIES		
Nominal sensing distance	0 ... 50 m	0 ... 40 m
Controlled height	Single-beam	
EMISSION DATA		
Emission	LED Infrared	
Effective beam angle	≤ ±5 °	≤ ±2.5 °
SAFETY PARAMETERS		
Type	2	4
INPUT/OUTPUT		
Response time	1 ms	
Output type	PNP	
Output function	To be connectred to SG-BWS-T4 Safety Control Unit Series	
HMI/UI		
LED indicators	Green (Power ON)	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±15%	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Impulsive overvoltage protections	Yes	
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing	
Ground resistivity	500 Vac 1 min., between electronics and housing	
MECHANICAL DATA		
Dimensions	105.6 x 25 x 70 mm	
Material	Plastic - PBT / PC	
Housing material	PBT Fiber Glass reinforced	
Active part material	PMMA	
Optical location	90°	
CERTIFICATIONS		
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)	
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)	
ENVIRONMENTAL DATA		
Operating Temperature	-40 ... 55 °C (Without freeze)	
Mechanical Protection	IP67	
Storage temperature max.	-40 ... 70 °C	
Shocks and vibrations	IEC60068-2-6	
Ambient light immunity	according to EN 60947-5-2 : 2020	

AVAILABLE MODELS

Type	Functions	Nominal sensing distance	Model
2	Emitter	LED Infrared Emitter 0 ... 50 m	**S300-PR-5-G00-EX-SG-ST2** (951451320)
4		LED Infrared Emitter 0 ... 40 m	**S300-PR-5-G00-EX-SG-ST4** (951451360)
2	Emitter with defogging	LED Infrared Emitter 0 ... 50 m	**S300-PR-5-G00-EX-M-SG-ST2** (951451330)
4		LED Infrared Emitter 0 ... 40 m	**S300-PR-5-G00-EX-M-SG-ST4** (951451370)
2	Receiver	n/a Receiver 0 ... 50 m	**S300-PR-5-F00-OC-SG-ST2** (951451340)
4		n/a Receiver 0 ... 40 m	**S300-PR-5-F00-OC-SG-ST4** (951451380)
2	Receiver with defogging	n/a Receiver 0 ... 50 m	**S300-PR-5-F00-OC-M-SG-ST2** (951451350)
4		n/a Receiver 0 ... 40 m	**S300-PR-5-F00-OC-M-SG-ST4** (951451390)

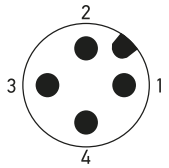
RESPONSE DIAGRAMS

S300-PR-*-F-**; S300-PR-*-G**-** Through beam**



CONNECTIONS

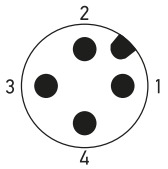
S300-PR-5-G00-EX--ST***
(Emitter)



MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	Test

S300-PR-5-F00-OC--ST***
(Receiver)

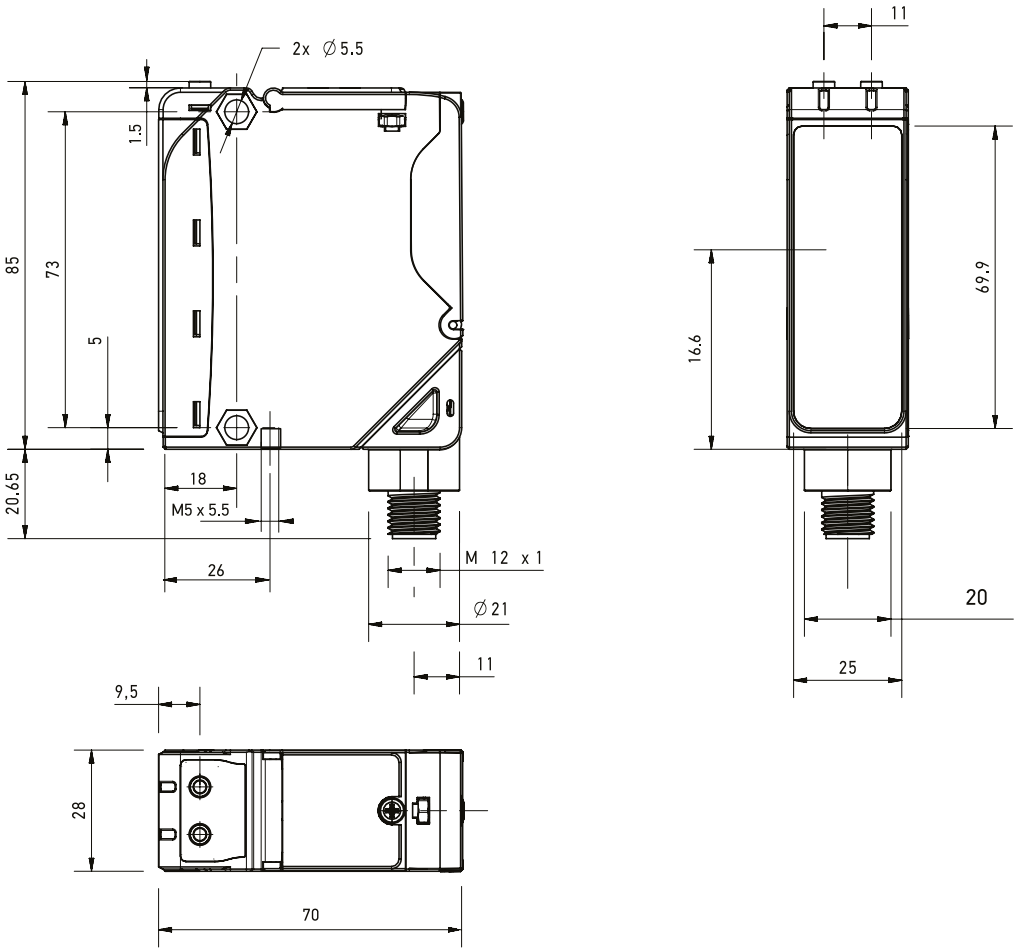


MALE
M12
4 pins

1	Brown	24 Vdc
2	White	NOT USED
3	Blue	0 V
4	Black	PNP 100 mA

MECHANICAL DRAWINGS

S300-PR-5-*00--*-SG-ST***



(mm)

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-02-U-03	Cable M12 4 poles axial female unshielded 3m UL 2464	95ASE1120
	CS-A1-02-U-05	Cable M12 4 poles axial female unshielded 5m UL 2464	95ASE1130
	CS-A1-02-U-10	Cable M12 4 poles axial female unshielded 10m UL 2464	95ASE1140
	CS-A1-02-U-15	Cable M12 4 poles axial female unshielded 15m UL 2464	95ASE1150
	CS-A1-02-U-25	Cable M12 4 poles axial female unshielded 25m UL 2464	95ASE1160
Mounting brackets	ST-5099	ST-5099 = Fixing bracket S300	95ACC2830
	ST-5100	ST-5100 = Fixing bracket S300	95ACC2840

DATASENSING
easing automation challenges

IP67 M18 M30

WEBSITE

SH/TH

SAFETY DEVICE



- M18 Models 10 m (axial optic) and 5 m (radial optic) operating distance
- M30 models 60 m operating distance
- EN50100 Category 2 and Category 4 compliant
- LED indicators
- Plastic and Metal Housing
- Inputs and Outputs IEC61131-2 compliant and adaptable with any safety module
- To be used together with a Category 2 or Category 4 safety control unit to obtain a safety system EN ISO 13849 compliant

CODE DESCRIPTION

SH 2 / E - 0 E - IC

series	**SH**	M18 safety photocell
	TH	M30 safety photocell
type	**2**	Type 2, 123 kHz modulation
	6	Type 4, 123 kHz modulation
	4	Type 4, 123 kHz modulation
model	**E**	Emitter unit
	R	Receiver unit
housing	**0**	Plastic housing, axial emission
	1	Metal housing, axial emission
	2	Plastic housing, radial emission
	3	Metal housing, radial emission
output connection	**K**	M2 radial connector output
	E	M12 connector output
logic	**IA**	Emitter Test Input Logic L = light H = dark, Receiver Output Logic: L = light, H = dark
	IC	Emitter Test Input Logic H = light L = dark, Receiver Output Logic: H= light, L = dark

TECHNICAL SPECIFICATIONS

	SH2/E-**IC	SH2/R-**IC
		
GENERAL DATA		
Operating principle	Emitter	Receiver
DETECTION CAPABILITIES		
Nominal sensing distance	0 ... 10 m	
Controlled height	Single-beam	
Thermal drift	≤ 10% Sr	
EMISSION DATA		
Emission	Red	
Effective beam angle	≤ ±5 ° (SH2/*-**IC)	
SAFETY PARAMETERS		
Type	2 (IEC 61496)	
Pl	c (EN ISO 13849)	
PFHd	1 x 10^{-6}	
INPUT/OUTPUT		
Output type		Totem-pole
HMI/UI		
LED indicators	Yellow (power)	Yellow (alignement)
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	5%	
Maximum No-load absorption	25mA	
Maximum DC output voltage drop		2.5 V @ IL=50mA
Maximum DC load current		70 mA
MECHANICAL DATA		
Dimensions	M18x1 / L=98 mm	
Housing material	PBT, Metal	
Active part material	Glass	
ENVIRONMENTAL DATA		
Operating Temperature	-20 ... 55 °C (without freeze)	
Mechanical Protection	IP67	
Storage temperature max.	-40 ... 75 °C	
Shocks and vibrations	IEC60068-2-6	
Humidity	15 ... 95 % no condensation	

TECHNICAL SPECIFICATIONS

	SH4/E-**IA	SH4/E-**IC	SH4/R-**IA	SH4/R-**IC
GENERAL DATA				
Operating principle	Emitter		Receiver	
Control units to be used	SBCR03 Series		SBCR03 Series	
DETECTION CAPABILITIES				
Nominal sensing distance	0 ... 10 m			
Controlled height	Single-beam			
Thermal drift	≤ 10% Sr			
EMISSION DATA				
Emission	Red			
Effective beam angle	≤ ±2.5 ° (SH4/*-*EI*)			
SAFETY PARAMETERS				
Type	4 (IEC 61496)			
PI	e (EN ISO 13849)			
PFHd	8.1 x 10^{-10}			
INPUT/OUTPUT				
Output type			Totem-pole	
Output function			To be connectred to SBCR03	
HMI/UI				
LED indicators	Yellow (power)		Yellow (alignement)	
ELECTRICAL DATA				
Supply voltage	10 ... 30 Vdc			
Maximum residual ripple	5%			
Maximum No-load absorption	25mA			
Maximum DC output voltage drop			2.5 V @ IL=50mA	
Maximum DC load current			70 mA	
MECHANICAL DATA				
Dimensions	M18x1 / L=98 mm			
Housing material	PBT, Metal			
Active part material	Glass			
ENVIRONMENTAL DATA				
Operating Temperature	-20 ... 55 °C (without freeze)			
Mechanical Protection	IP67			
Storage temperature max.	-40 ... 75 °C			
Shocks and vibrations	IEC60068-2-6			
Humidity	15 ... 95 % no condensation			

TECHNICAL SPECIFICATIONS

	TH2/E-KIC	TH2/R-KIC
		
GENERAL DATA		
Operating principle	Emitter	Receiver
DETECTION CAPABILITIES		
Nominal sensing distance	0 ... 60 m	
Controlled height	Single-beam	
Thermal drift	≤ 10% Sr	
EMISSION DATA		
Emission	Red	
Effective beam angle	≤ ±5 ° (TH2/*-KIC)	
SAFETY PARAMETERS		
Type	2 (IEC 61496)	
Pl	c (EN ISO 13849)	
PFHd	1 x 10^{-6}	
INPUT/OUTPUT		
Output type		Totem-pole
HMI/UI		
LED indicators	Yellow (power)	Yellow (alignement)
ELECTRICAL DATA		
Supply voltage	10 ... 30 Vdc	
Maximum residual ripple	5%	
Maximum No-load absorption	25mA	
Maximum DC output voltage drop		2.5 V @ IL=50mA
Maximum DC load current		70 mA
MECHANICAL DATA		
Dimensions	M30x1.5 / L=100 mm	
Housing material	Metal	
Active part material	Glass	
Optical location	Axial	
ENVIRONMENTAL DATA		
Operating Temperature	-20 ... 55 °C (without freeze)	
Mechanical Protection	IP67	
Storage temperature max.	-40 ... 75 °C	
Shocks and vibrations	IEC60068-2-6	
Humidity	15 ... 95 % no condensation	

TECHNICAL SPECIFICATIONS

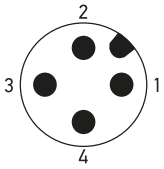
	TH6/E-KIA	TH6/E-KIC	TH6/R-KIA	TH6/R-KIC
				
GENERAL DATA				
Operating principle	Emitter		Receiver	
Control units to be used	SBCR03 Series		SBCR03 Series	
DETECTION CAPABILITIES				
Nominal sensing distance	0 ... 60 m			
Controlled height	Single-beam			
Thermal drift	≤ 10% Sr			
EMISSION DATA				
Emission	Red			
Effective beam angle	≤ ±2.5 ° (TH6/*-KI*)			
SAFETY PARAMETERS				
Type	4 (IEC 61496)			
Pl	e (EN ISO 13849)			
PFHd	8.1 x 10^{-10}			
INPUT/OUTPUT				
Output type			Totem-pole	
Output function			To be connectred to SBCR03	
HMI/UI				
LED indicators	Yellow (power)		Yellow (alignement)	
ELECTRICAL DATA				
Supply voltage	10 ... 30 Vdc			
Maximum residual ripple	5%			
Maximum No-load absorption	25mA			
Maximum DC output voltage drop			2.5 V @ IL=50mA	
Maximum DC load current			70 mA	
MECHANICAL DATA				
Dimensions	M30x1.5 / L=100 mm			
Housing material	Metal			
Active part material	Glass			
Optical location	Axial			
ENVIRONMENTAL DATA				
Operating Temperature	-20 ... 55 °C (without freeze)			
Mechanical Protection	IP67			
Storage temperature max.	-40 ... 75 °C			
Shocks and vibrations	IEC60068-2-6			
Humidity	15 ... 95 % no condensation			

AVAILABLE MODELS

Diameter / Dimensions	Type	Operating principle	Nominal sensing distance	Housing material	Model
M18	2	Emitter	Red Emitter 0 ... 10 m	PBT	SH2/E-0EIC
					SH2/E-0KIC
					SH2/E-2EIC
				Metal	SH2/E-1EIC
					SH2/E-1KIC
					SH2/E-3EIC
		Receiver	Receiver 0 ... 10 m	PBT	SH2/R-0EIC
					SH2/R-0KIC
					SH2/R-2EIC
				Metal	SH2/R-1EIC
					SH2/R-1KIC
					SH2/R-3EIC
	4	Emitter	Red Emitter 0 ... 10 m	PBT	SH4/E-0EIA
					SH4/E-0KIA
					SH4/E-2EIA
					SH4/E-0EIC
					SH4/E-2EIC
				Metal	SH4/E-1EIA
					SH4/E-1KIA
					SH4/E-1EIC
					SH4/E-3EIC
		Receiver	Receiver 0 ... 10 m	PBT	SH4/R-0EIA
					SH4/R-0KIA
					SH4/R-2EIA
					SH4/R-0EIC
					SH4/R-2EIC
				Metal	SH4/R-1EIA
					SH4/R-1KIA
					SH4/R-1EIC
					SH4/R-3EIC
M30	2	Emitter	Red Emitter 0 ... 60 m	Metal	TH2/E-KIC
		Receiver	Receiver 0 ... 60 m		TH2/R-KIC
	4	Emitter	Red Emitter 0 ... 60 m		TH6/E-KIA
					TH6/E-KIC
		Receiver	Receiver 0 ... 60 m		TH6/R-KIA
					TH6/R-KIC

CONNECTIONS

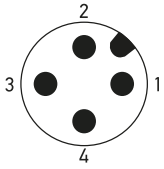
SH*/E-**, TH*/E-*****



MALE M12
3 pins SH /TH
safety sensors

1	Brown	10...30 Vdc
2		n.c.
3	Blue	
4	Black	Test

SH*/R-**, TH*/R-*****

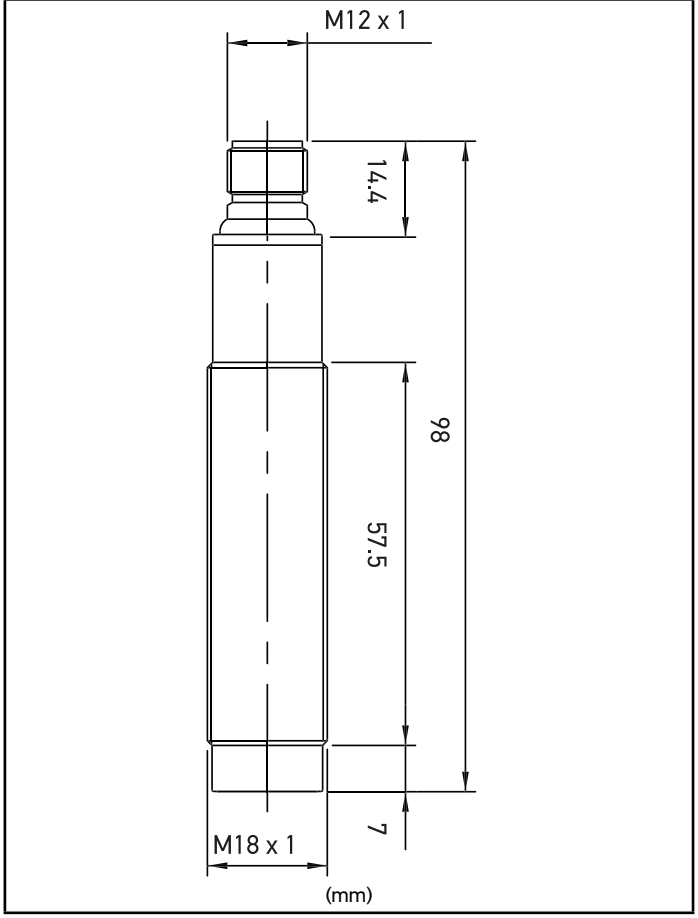


MALE M12
3 pins SH /TH
safety sensors

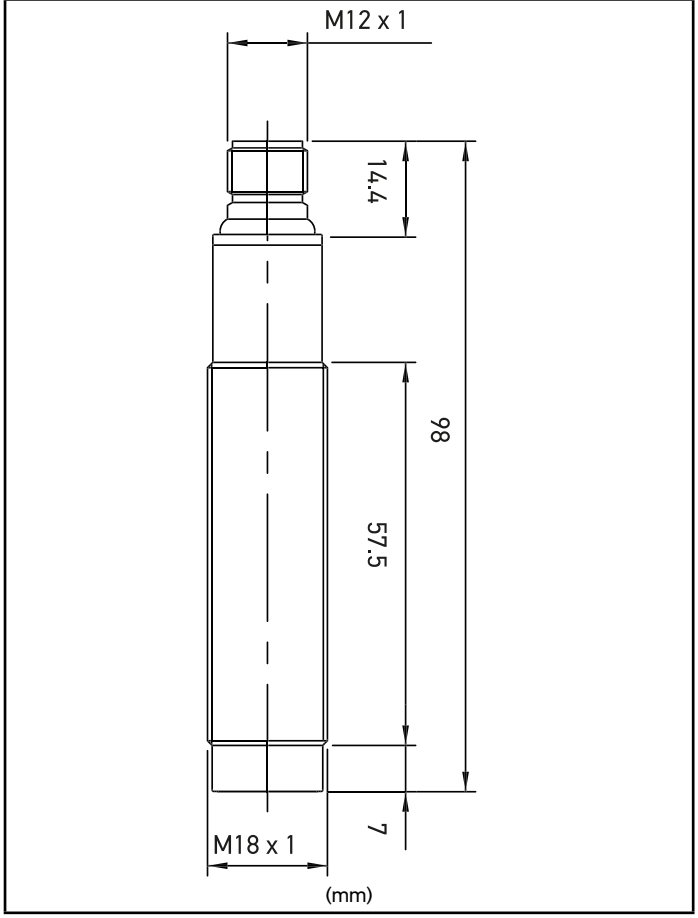
1	Brown	10...30 Vdc
2		n.c.
3	Blue	
4	Black	Output

MECHANICAL DRAWINGS

SH*/*-0E**

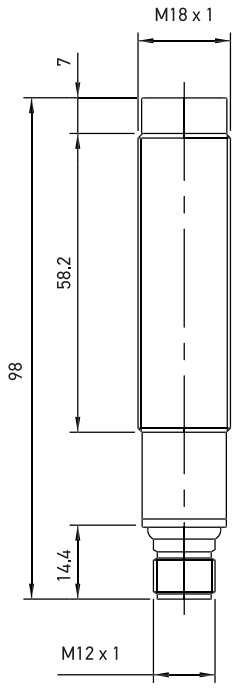


SH*/*-0E**



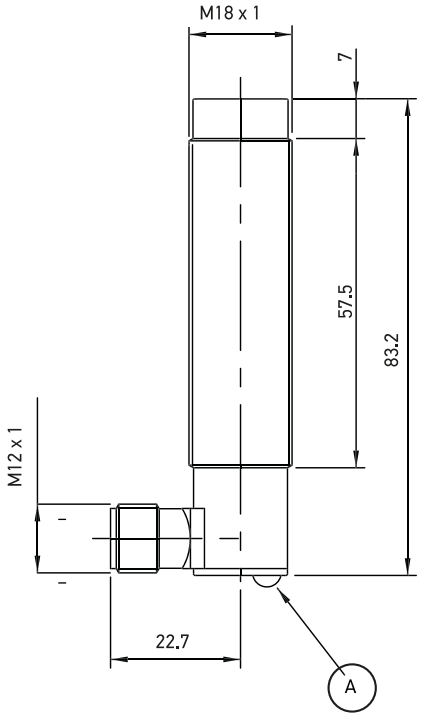
MECHANICAL DRAWINGS

SH*/*-1E**



(mm)

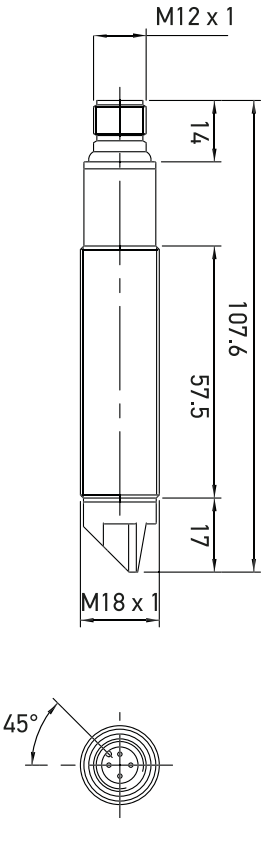
SH*/*-0K**



(mm)

Models	A
SH*/*-0K**	LED

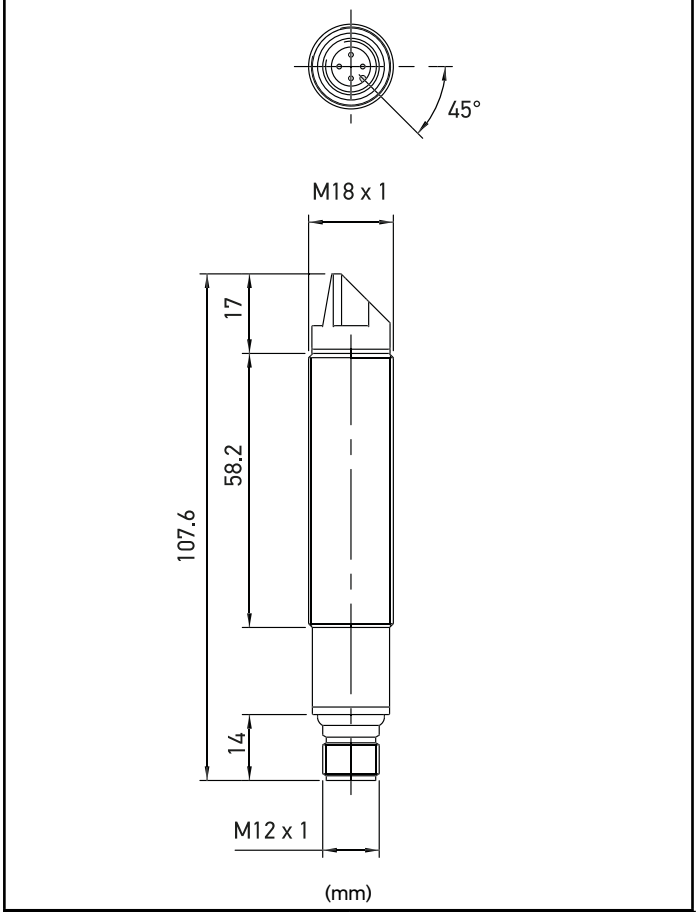
SH*/*-2E**



(mm)

MECHANICAL DRAWINGS

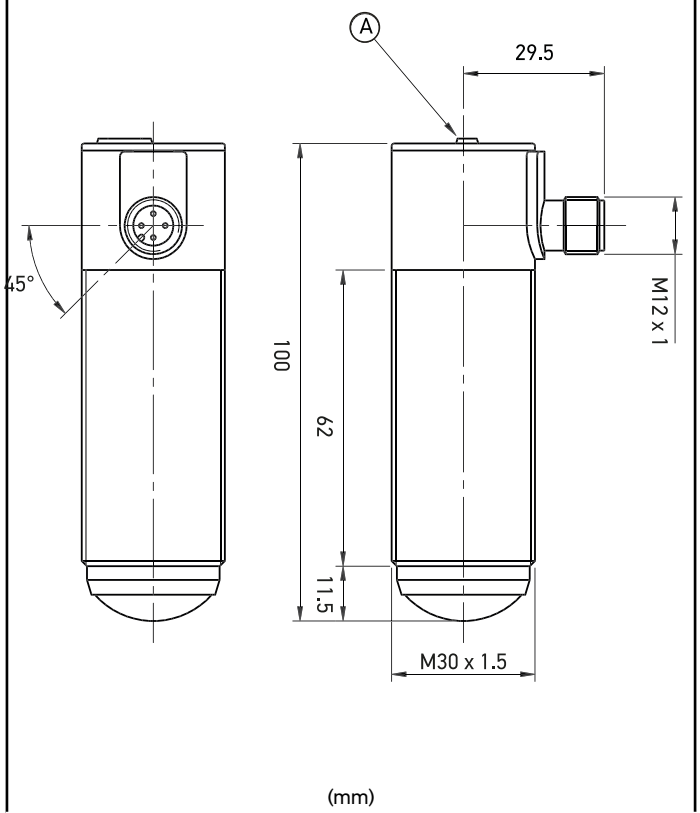
SH*/*-3E**



(mm)

Models	A
SH*/*-3E**	LED

TH*/*-1K**



(mm)

Model	A
TH*/*-1K**	LED

ACCESSORIES TO BE ORDERED SEPARATELY

	Model	Description	Article code
Cables	CD12M/AA-020A1	Connect.M12-F,3 poles-2m,PVC,Axial	CD12M/AA-020A1
	CD12M/AA-020C1	Connect.M12-F,3 poles-2m,PVC,90°	CD12M/AA-020C1
	CD12M/AA-050A1	Connect.M12-F,3 poles-5m,PVC,Axial	CD12M/AA-050A1
	CD12M/AA-050C1	Connect.M12-F,3 poles-5m,PVC,90°	CD12M/AA-050C1
	CD12M/AA-070A1	Connect.M12-F,3 poles-7m,PVC,Axial	CD12M/AA-070A1
	CD12M/AA-070C1	Connect.M12-F,3 poles-7m,PVC,90°	CD12M/AA-070C1
	CD12M/AA-100A1	Connect.M12-F,3 poles-10m,PVC,Axial	CD12M/AA-100A1
	CD12M/AA-100C1	Connect.M12-F,3 poles-10m,PVC,90°	CD12M/AA-100C1
	CD12M/AA-150A1	Connect.M12-F,3 poles-15m,PVC,Axial	CD12M/AA-150A1
	CD12M/AA-150C1	Connect.M12-F,3 poles-15m,PVC,90°	CD12M/AA-150C1
	CD12M/AA-200C1	Connect.M12-F,3 poles-20m,PVC,90°	CD12M/AA-200C1
	CD12M/0B-020A1	Connect.M12-F,4 poles-2m,PVC,Axial	CD12M/0B-020A1
	CD12M/0B-020A5	Connect.M12-F,4 poles-2m,PUR,Axial	CD12M/0B-020A5
	CD12M/0B-020C1	Connect.M12-F,4 poles-2m,PVC,90°	CD12M/0B-020C1
	CD12M/0B-020C5	Connect.M12-F,4 poles-2m,PUR,90°	CD12M/0B-020C5
	CD12M/0B-050A1	Connect.M12-F,4 poles-5m,PVC,Axial	CD12M/0B-050A1
	CD12M/0B-050A5	Connect.M12-F,4 poles-5m,PUR,Axial	CD12M/0B-050A5
	CD12M/0B-050C1	Connect.M12-F,4 poles-5m,PVC,90°	CD12M/0B-050C1
	CD12M/0B-050C5	Connect.M12-F,4 poles-5m,PUR,90°	CD12M/0B-050C5
	CD12M/0B-070A1	Connect.M12-F,4 poles-7m,PVC,Axial	CD12M/0B-070A1
	CD12M/0B-070C1	Connect.M12-F,4 poles-7m,PVC,90°	CD12M/0B-070C1
	CD12M/0B-100A1	Connect.M12-F,4 poles-10m,PVC,Axial	CD12M/0B-100A1
	CD12M/0B-100A5	Connect.M12-F,4 poles-10m,PUR,Axial	CD12M/0B-100A5
	CD12M/0B-100C1	Connect.M12-F,4 poles-10m,PVC,90°	CD12M/0B-100C1
	CD12M/0B-100C5	Connect.M12-F,4 poles-10m,PUR,90°	CD12M/0B-100C5
	CD12M/0B-150A1	Connect.M12-F,4 poles-15m,PVC,Axial	CD12M/0B-150A1
	CD12M/0B-150C1	Connect.M12-F,4 poles-15m,PVC,90°	CD12M/0B-150C1
	CD12M/0B-200A1	Connect.M12-F,4 poles-20m,PVC,Axial	CD12M/0B-200A1
	CD12M/0B-200C1	Connect.M12-F,4 poles-20m,PVC,90°	CD12M/0B-200C1
	CD12M/0B-050B1	Connector Male M12 Axial 4 poles cable PVC 5 m	CD12M/0B-050B1
	CD12M/0B-100B1	Connector Male M12 Axial 4 poles cable PVC 10 m	CD12M/0B-100B1
Mounting brackets	ST 18-A	Bracket M18 axial	ST 18-A
	ST 18-A7W	Bracket M18 axial AISI316L	ST 18-A7W
	ST 18-C	Bracket M18 90*	ST 18-C
	ST 18-C7W	Bracket M18 90* AISI316L	ST 18-C7W
	ST 18-V	Vertical fixing bracket	ST 18-V

DATASENSING
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SAFETY CONTROL UNITS

SG-BWS

SAFETY CONTROL UNIT FOR PHOTOELECTRIC SENSORS WITH MUTING



- Integrated control of 4 or 8 single beams and 2 light curtains
- Simple DIP Switch configuration
- Muting functions can be assigned to light curtains or single beams
- EDM, auto/manual restart mode, T/L Muting configurable
- Compatible with sensors: S5-5-*-SG-ST*, SL5-5-*-SG-ST4, S300-PR-5-*-SG-ST*

• Robots
• Automatic assembling lines
• Palletizers and Depalletizers

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SBCR03

SAFETY DEVICE



- Up to 6 sets of safety photocells M18 (SH4-IA) or M30 (TH6-IA) interconnectable
- DIN RAIL Mounting
- Body protection and access control
- Cat. 2 according to EN 61496-1
- Cat. 2 / PL c according to EN ISO 13849-1; SIL CL 1 acording to EN 62061 / IEC 61508
- Models with single/double channel Muting and Override functions
- Response time less than 5 ms
- 2 OSSD outputs

• Robots
• Automatic assembling lines
• Palletizers and Depalletizers

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INTERACTIVE INDEX

DATASENSING
easing automation challenges

WEBSITE

SG-BWS

SAFETY CONTROL UNIT FOR PHOTOELECTRIC SENSORS WITH MUTING



- Integrated control of 4 or 8 single beams and 2 light curtains
- Simple DIP Switch configuration
- Muting functions can be assigned to light curtains or single beams
- EDM, auto/manual restart mode, T/L Muting configurable
- Compatible with sensors: S5-5-*-SG-ST*, SL5-5-*-SG-ST4, S300-PR-5-*-SG-ST*

CODE DESCRIPTION

SG-BWS - T4 - 2 - MT

series	**SG-BWS**	Safety Control Unit
safety level	**T4**	Type 4
safety connectivity		4 Single beam pairs (S5/SL5/S300) monitored
	2	8 Single beam pairs (S5/SL5/S300) monitored
safety functions		Auto/Manual Reset, EDM
	MT	Auto/Manual Reset, EDM, Muting, Override

TECHNICAL SPECIFICATIONS

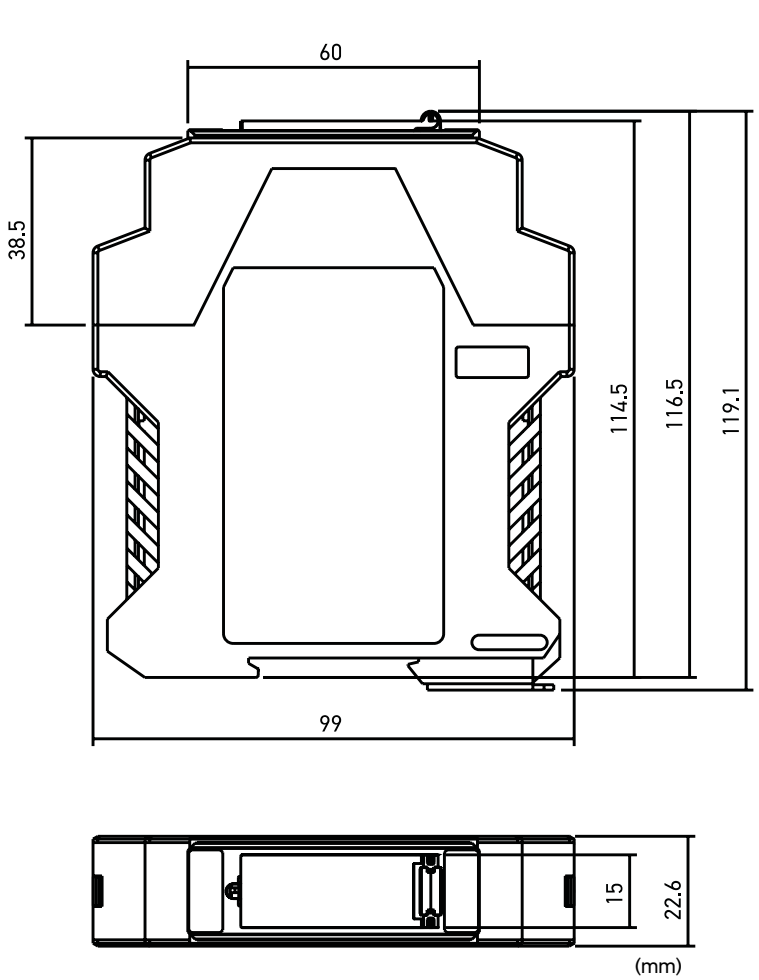
	SG-BWS-T4	SG-BWS-T4-2	SG-BWS-T4-MT	SG-BWS-T4-2-MT
GENERAL DATA				
Operating principle	Control unit			
Maximum number of connected sensors	4 pairs S5*ST/SL5*ST/ S300*ST	8 pairs S5*ST/SL5*ST/ S300*ST	4 pairs S5*ST/SL5*ST/ S300*ST	8 pairs S5*ST/SL5*ST/ S300*ST
FUNCTIONS				
Available functions	Manual/Automatic Restart, EDM	Mamual/Automatic Re-start, EDM	Manual/Automatic Restart, EDM, Double Muting, Override	
Maximum number of muting sensors	0		4 PNP-NO	
Muting lamp output				
SAFETY PARAMETERS				
Type	4			
Pl	e			
SIL	SIL 3 (IEC 61508)			
INPUT/OUTPUT				
Output type	2 x PNP		2 x Relay	
Input type	4 inputs from S5/SL5/S300 safety sensors, 3 inputs for test/reset/EDM/selector	8 inputs from S5/SL5/S300 safety sensors, 3 inputs for test/reset/EDM/selector	4 inputs from S5/SL5/S300 safety sensors, 9 inputs for test/reset/EDM/selector/ muting enable/override, 2 OSSD couples from SLCs, 4 muting inputs	8 inputs from S5/SL5/S300 safety sensors, 9 inputs for test/reset/EDM/selector/ muting enable/override, 2 OSSD couples from SLCs, 4 muting inputs
ELECTRICAL DATA				
Supply voltage	24 Vdc ±15%			
Power consumption	≤ 3.8 W			
Maximum DC load current	0.5 A each output		3.6 A each output	
MECHANICAL DATA				
Dimensions	23 x 99 x 119 mm		68 x 99 x 119 mm	
Material	Plastic - PA66			
Connections	Terminal block			
Length of cables (Power)	≤ 50 m			
Cables lenght (sensors)	≤ 50 m			
CERTIFICATIONS				
Shocks	16 ms (10 G) 1,000 shocks per axis (EN 60068-2-29)			
Vibrations	Width 0.35 mm, frequency 10 ... 55Hz; 20 sweep per axis, 1octave/min (EN 60068-2-6)			
Electromagnetic compatibility	IEC EN 60947-5-2			
ENVIRONMENTAL DATA				
Operating Temperature	0 ... 55 °C			
Storage temperature max.	-25 ... 70 °C			
Mechanical Protection	IP20			

AVAILABLE MODELS

Type	Detection capability	Nominal sensing distance	Response time max	Model
4	4 safety light beam inputs	According to the sensors used: S5*ST* up to 8m; SL5*ST and S300*ST4 up to 40m; S300*ST2 up to 50m	29 ms	**SG-BWS-T4** (957051000)
	8 safety light beam inputs		33 ms	**SG-BWS-T4-2** (957051030)
	4 safety light beam inputs - muting		35 ms	**SG-BWS-T4-MT** (957051010)
	8 safety light beam inputs - muting		39 ms	**SG-BWS-T4-2-MT** (957051040)

MECHANICAL DRAWINGS

SG-BWS-T4-*-**



DATASENSING
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WEBSITE

SBCR03
SAFETY DEVICE



- Up to 6 sets of safety photocells M18 (SH4-IA) or M30 (TH6-IA) interconnectable
- DIN RAIL Mounting
- Body protection and access control
- Cat. 2 according to EN 61496-1
- Cat. 2 / PL c according to EN ISO 13849-1; SIL CL 1 acording to EN 62061 / IEC 61508
- Models with single/double channel Muting and Override functions
- Response time less than 5 ms
- 2 OSSD outputs

CODE DESCRIPTION

SBCR03 / S - A 0

series	**SBCR03**	Safety control unit for safety photocells
power supply	**S**	24 Vdc operating voltage
inputs	**A**	Suitable for safety photocells
type	**0**	Standard model
	M	Muting / Override model

TECHNICAL SPECIFICATIONS

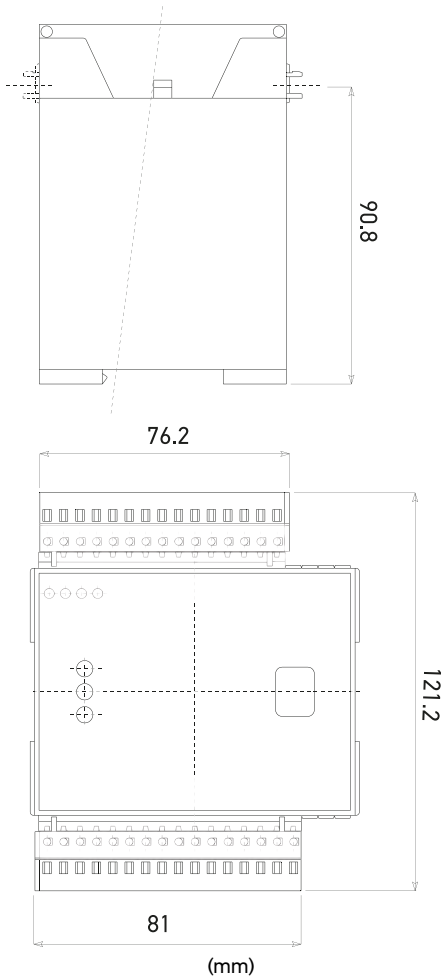
	SBCR03/S-A0	SBCR03/S-AM
GENERAL DATA		
Operating principle	Control unit	
Maximum number of connected sensors	6 pairs SH4_IA/TH6_IA	
FUNCTIONS		
Available functions	Manual/Automatic Restart, EDM	Manual/Automatic Restart, EDM, Muting, Double Muting, Override
Maximum number of muting sensors		4 PNP-NO
Muting lamp output		1 ... 10 W 2 incandescent lamp, 24 Vdc
State lamp output	1 ... 10 W 1 x incandescent lamp, 24 Vdc	
SAFETY PARAMETERS		
Type	2 (EN 61496)	
Pl	c (EN ISO 13849-1)	
SIL	SIL 1 (IEC 61508)	
PFHd	1×10^{-6}	
Mission Time (TM)	20 years	
INPUT/OUTPUT		
Output type	2 x PNP (OSSD safety output)	
ELECTRICAL DATA		
Supply voltage	24 Vdc ±20%	
Maximum No-load absorption	100 mA	150 mA
Power consumption	4 W Without lamps/loads	
Maximum DC output voltage drop	2.5 V @ IL=500mA	
Maximum DC load current	500 mA each output	
Recovery time (relay excitation)	≤ 50 ms	
Response time (muting function)	≤ 270 ms	
Response time (testing input)	≤ 30 ms	
MECHANICAL DATA		
Dimensions	99 x 105 x 100 mm	121 x 105 x 100 mm
Housing material	ABS UL VO	
Connections	Terminals 1 x terminals bar	Terminals 2 x terminals bar
Length of cables (Power)	30 m 30 with cable section 0.5 mm^2; 60 with cable section 2.5 mm^2	
Cables length (sensors)	≤ 100 m cable section 2 mm2	
ENVIRONMENTAL DATA		
Operating Temperature	-20 ... 60 °C (without freeze)	
Storage temperature max.	-25 ... 70 °C	
Mechanical Protection	IP20	
Humidity	15 ... 95 % no condensation	

AVAILABLE MODELS

Type	Nominal sensing distance	Response time	Available functions	Model
2	According to the sensors used: SH4/*-**IA up to 10m TH6/*-*IA up to 60m	12 ms	Manual/Automatic Restart, EDM	**SBCR03/S-A0**
			Manual/Automatic Restart, EDM, Muting, Double Muting, Override	**SBCR03/S-AM**

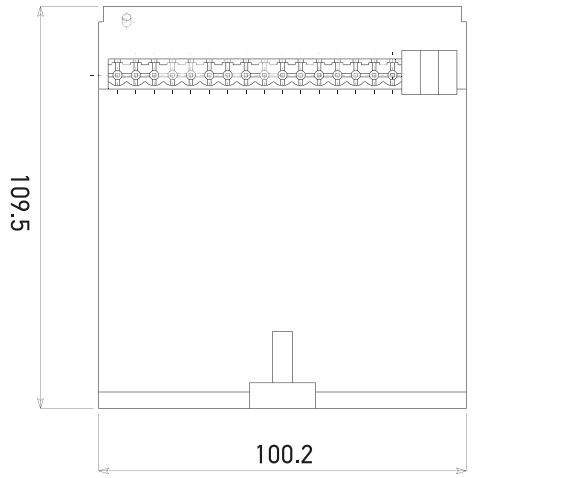
MECHANICAL DRAWINGS

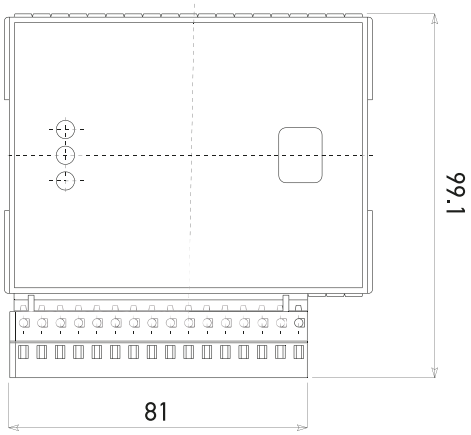
SBCR03/S-AM



MECHANICAL DRAWINGS

SBCR03/S-A0





(mm)

DATASENSING
easing automation challenges



SAFETY LASER SCANNERS

Enhanced Laser Sentinel

SAFETY LASER SCANNER



LASER SENTINEL is the innovative solution for safe area protection in a large variety of applications in automation and intralogistic industries.
It offers a complete and flexible solution for the safeguard of robotic cells, automated guided vehicles and general machinery.

- Safety laser scanner based on Time Of Flight measurement
- More than 72 m2 safely monitored, with 5.5 m over 275°
- High detection performances in compact size
- Advanced dust filtering
- Easy programming with intuitive Graphic User Interface
- Dimensions (w,d,h): 102 , 112.5, 152 mm
- I/O connection with standard M12 cables
- Up to 3 simultaneous safety zones
- 2 Warning zones up to 40 m
- 30/40/50/70/150 mm selectable detection capability
- Up to 70 zone sets
- Partial dynamic muting
- Metal brackets allowing full orientation and fast replacement
- Advanced measurement data protocol
- Colour graphic display for monitoring and diagnostics
- Speed measurement with encoder in

• Processing machines.
• Metal working.
• Food and beverage applications.
• Application with increased temperature range requirements

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Enhanced Laser Sentinel EVO

SAFETY LASER SCANNER FOR PROFINET AND PROFISAFE



Safety laser scanner based on Time of Flight measurement with command integration in Profinet/Profisafe fieldbus

- Type 3 / PL d / SIL 2
- Safety range : 5.5 m x 275°
- Profinet-Profisafe command integration
- Up to 8 simoultaneous controlled area
- Up to 70 switchable zone sets
- Easy and fast configuration by DLSentinel Gui, including off line emulator
- Enhanced series complete set of functions

• Robot cells (pick and place, inspection, testing, welding, etc)
• Palletizers / depalletizers
• Open machinery, process lines
• Automated Guided Vehicles (AGV)
• Automated Guided Carts (AGC)
• Mobile Industrial Robots

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INTERACTIVE INDEX

DATASENSING
easing automation challenges

WEBSITE

Enhanced Laser Sentinel

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- Advanced measurement data protocol
- Colour graphic display for monitoring and diagnostics
- Speed measurement with encoder in

CODE DESCRIPTION

SLS - M 3 - E - 08 E

series	**SLS**	Enhanced laser sentinel
model	**SA**	Standalone, 6 zones sets
	M	Master, 10 zones sets
	R	Slave (or remote)
max safety range	**5**	5.5 m
	3	3 m
encoder inputs	**E**	encoder inputs on secondary connector
		not present
I/O connectors	**08**	M12 8-pin male
	0812	M12 8-pin male or M12 12-pin male
	1708	M12 17-pin male and M12 8-pin male
enhanced version	**E**	Enhanced version
		Standard Enhanced version (*)

TECHNICAL SPECIFICATIONS

	SLS-SA*-08	SLS-M*-0812-E	SLS-M*-1708-E	SLS-M5-E-1708-E	SLS-R*-E
FEATURES AND PERFORMANCES					
Detection capability	30/40/50/70/150 mm selectable				
Angular resolution min	0.1 °				0.5 °
Safety range with detection capability = 30 mm	0.05 ... 2.5 m				
Safety range with detection capability = 40 mm	0.05 ... 3m				
Safety range with detection capability = 50 mm	0.05 ... 4 m				
Safety range with detection capability = 70 mm	0.05 ... 5.5 m				
Safety range with detection capability = 150 mm	0.05 ... 5.5 m				
Max warning zone range	40 m @ 90% remission target (white)				
Max simultaneous safety zones	1	2 M12 12 p. connector	3		Not applicable
Response time	62 ... 1202 ms				
Tolerance zone	100 mm				
Supplement for retroreflectors on scan plane in front of a safety zone	200 mm				
NUMBER OF ZONESET					
With 1 safety zone min		3 M12-8 p. connector	20 M12-17 p. connector		
With 1 safety zone max	3	10 M12-12 p connector	70 M12-17 p. + M12-8 p. connectors		
With 1 safety zone + 1 warning zone min		2 M12-8 p. connector	20 M12-17 p. connector		
With 1 safety zone + 1 warning zone max	2	6 M12-12 p. connector	70 M12-17 p. + M12-8 p. connectors		
With 1 safety zone + 2 warning zone min		3 M12-12 p. connector	20 M12-17 p. connector		
With 1 safety zone + 2 warning zone max		3 M12-12 p. connector	70 M12-17 p. + M12-8 p. connectors		
With 2 safety zone min		3 M12-17 p. connector	20 M12-17 p. connector		
With 2 safety zone max		3 M12-12 p connector	70 M12-17 p. + M12-8 p. connectors		
With 2 safety zone + 1 warning zone min		2 M12-12 p. connector	10 M12-17 p. connector		
With 2 safety zone + 1 warning zone max		2 M12-12 p. connector	70 M12-17 p. + M12-8 p. connectors		
With 2 safety zone + 2 warning zone min		1 M12-12 p. connector	6 M12-17 p. connector		
With 2 safety zone + 2 warning zone max		1 M12-12 p. connector	70 M12-17 p. + M12-8 p. connectors		
With 3 safety zone min		2 M12-12 p. connector	10 M12-17 p. connector		
With 3 safety zone max		2 M12-12 p. connector	70 M12-17 p. + M12-8 p. connectors		
ELECTRICAL DATA					
Power Supply	24 Vdc ± 20%				
Power consumption	8 W @24 V, Single device, without load				
CONFIGURABLE INPUT/ OUTPUT					
OSSD	1x2	2x2 M12-8 p. connector	3x2		
Configurable input max	0	2	12	12 4 HF inputs for encoders	Not applicable
Configurable output max	0		2		Not applicable
Configurable input/output max	3	1	4		Not applicable
High-speed inputs (100 kHz)	Not applicable			4	Not applicable
COMMUNICATION					
Network Interface	10/100 Mbit/s Ethernet				Not applicable
HMI/UI					
Configuration and monitoring interfaces	DL Sentinel 3.2x				
LED indicators	OSSD / Warning / Interlock				

TECHNICAL SPECIFICATIONS

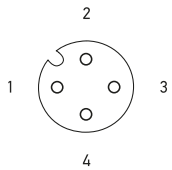
	SLS-SA*-08	SLS-M*-0812-E	SLS-M*-1708-E	SLS-M5-E-1708-E	SLS-R*-E
MECHANICAL DATA					
Dimensions	102 x 113 x 152 mm				
Material	Metal - Aluminium / PMMA				
Housing material	Painted aluminininium / PC				
Optic window material	PMMA				
ENVIRONMENTAL DATA					
Humidity	15 ... 95 %				
Mechanical protection	IP 65 (EN 60529)				
Operating Temperature	-10 ... 50 °C				
Storage temperature max.	-20 ... 70 °C				
OPTICAL DATA					
Laser class	1 (EN 60825-1:2014)				
SAFETY PARAMETERS					
Type	3				
SIL	SIL 2 (IEC 61508)				
Cat.	3 (EN ISO 13849-1)				
PFHd	6.38 10-8				
Mission Time (TM)	20 years according to EN ISO 13849				
FUNCTIONS					
Generic Alarm	Available				
Clean Window Alarm	Available				
Muting enable	Available				Not applicable
Override	Available				Not applicable
EDM (External Device Monitoring)	Available				Not applicable
Partial / dynamic Muting for first OSSD	Available				Not applicable
Pre-alarm (warning)	Available				Not applicable
Advanced data transfer protocol	Available				
Reset (restart cycle)	Available				Not applicable
Shut off (mute)	Available				Not applicable
Manual / automatic restart	Available				Not applicable
Reference points	Available				

AVAILABLE MODELS

Description	Model
SLS master 3 m safety distance - up to 10 zone set	**SLS-M3-0812-E** (958001020)
SLS master 3 m safety distance - up to 70 zone set	**SLS-M3-1708-E** (958001010)
SLS stand alone 3 m safety distance - up to 10 zone set	**SLS-M5-0812-E** (958001110)
SLS master 5.5 m safety distance - up to 70 zone set	**SLS-M5-1708-E** (958001030)
SLS master 5.5 m safety distance - up to 70 zone set - Encoder input	**SLS-M5-E-1708-E** (958001050)
SLS remote 3 m safety distance	**SLS-R3-E** (958001060)
SLS remote 5.5 m safety distance	**SLS-R5-E** (958001120)
SLS stand alone 3 m safety distance - up to 6 zone set	**SLS-SA3-08** (958001080)
SLS stand alone 5.5 m safety distance - up to 6 zone set	**SLS-SA5-08** (958001090)

CONNECTIONS

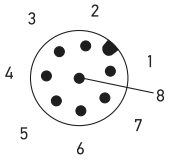
SLS-SA*-08



FEMALE M12
4 pins Ethernet,
F, Key D

1	Transmit data+
2	Receive data+
3	Transmit data-
4	Receive data-

SLS-SA*-08

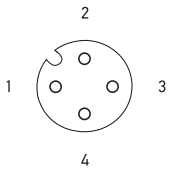


MALE
M12
8 pins Safety SLS
stand alone

1	White	CONFIGURABLE INPUT/ OUTPUT
2	Brown	24 Vdc
3	Green	CONFIGURABLE INPUT/ OUTPUT
4	Yellow	CONFIGURABLE INPUT/ OUTPUT
5	Grey	OSSD11
6	Pink	OSSD12
7	Blue	0 Vdc
8	Red	F_Earth

CONNECTIONS

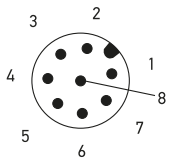
SLS-M*-0812-E



FEMALE M12
4 pins Ethernet,
F, Key D

1		Transmit data+
2		Receive data+
3		Transmit data-
4		Receive data-

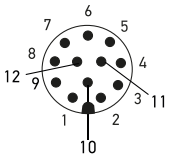
SLS-M*-0812-E



MALE
M12
8 pins Safety SLS
master 0812

1	White	CONFIGURABLE INPUT/ OUTPUT
2	Brown	24 Vdc
3	Green	CONFIGURABLE INPUT
4	Yellow	CONFIGURABLE INPUT
5	Grey	OSSD11
6	Pink	OSSD12
7	Blue	0 Vdc
8	Red	F_Earth

SLS-M*-0812-E

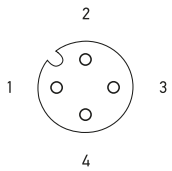


MALE
M12
12 pins Safety

1	Brown	24 Vdc
2	Blue	0 Vdc
3	White	CONFIGURABLE INPUT
4	Green	24 Vdc
5	Pink	OSSD12
6	Yellow	0 Vdc
7	Black	CONFIGURABLE INPUT/ OUTPUT
8	Gray	OSSD11
9	Red	CONFIGURABLE INPUT/ OUTPUT
10	Violet	CONFIGURABLE INPUT/ OUTPUT
11	Gray/Pink	CONFIGURABLE INPUT/ OUTPUT
12	Red/Blue	F_Earth

CONNECTIONS

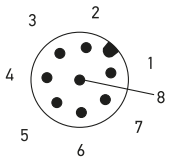
SLS-M*-1708-E



FEMALE M12
4 pins Ethernet,
F, Key D

1	Transmit data+
2	Receive data+
3	Transmit data-
4	Receive data-

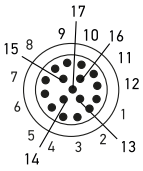
SLS-M*-1708-E



MALE
M12
8 pins Safety SLS
master 1708

1	White	CONFIGURABLE INPUT
2	Brown	CONFIGURABLE INPUT
3	Green	CONFIGURABLE INPUT
4	Yellow	HF INPUT (ENC 11)
5	Grey	HF INPUT (ENC 21)
6	Pink	HF INPUT (ENC 12)
7	Blue	CONFIGURABLE INPUT
8	Red	HF INPUT (ENC 22)

SLS-M*-1708-E

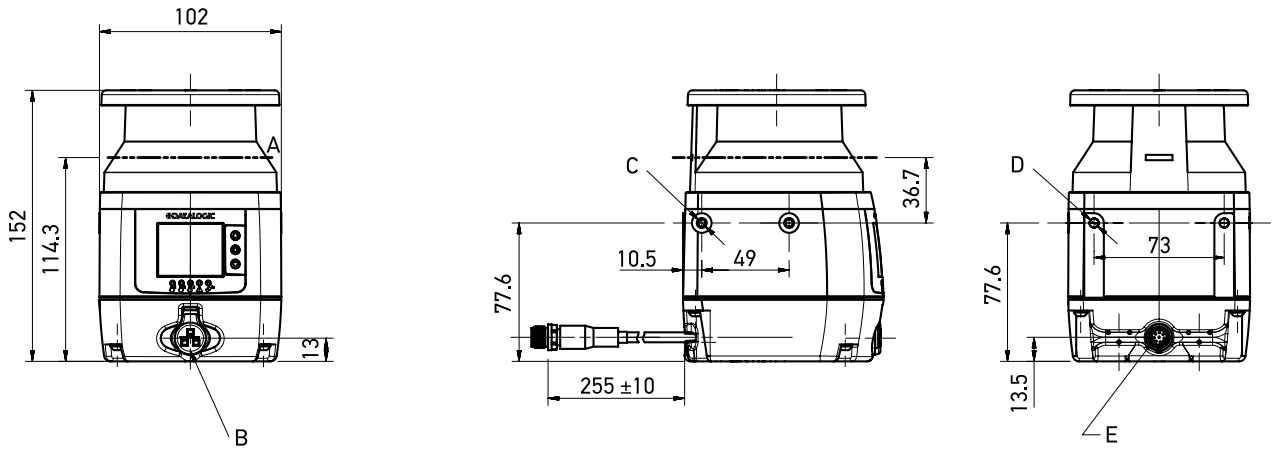


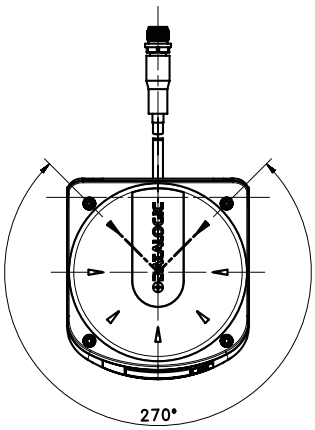
MALE
M12
17 pins Safety
SLS master 1708

1	Brown	24 Vdc
2	Blue	0 V
3	Blue	0 V
4	Green	CONFIGURABLE INPUT
5	White/Black	CONFIGURABLE INPUT
6	Orange	CONFIGURABLE INPUT
7	Black	CONFIGURABLE INPUT
8	Pink	OSSD12
9	Red	CONFIGURABLE INPUT
10	Brown	24 Vdc
11	Brown	24 Vdc
12	Blue	0 V
13	Grey	OSSD11
14	White	CONFIGURABLE INPUT
15	Yellow	CONFIGURABLE INPUT
16	Yellow/Green	F_Earth
17	Violet	CONFIGURABLE INPUT

MECHANICAL DRAWINGS

SLS-SA*-**



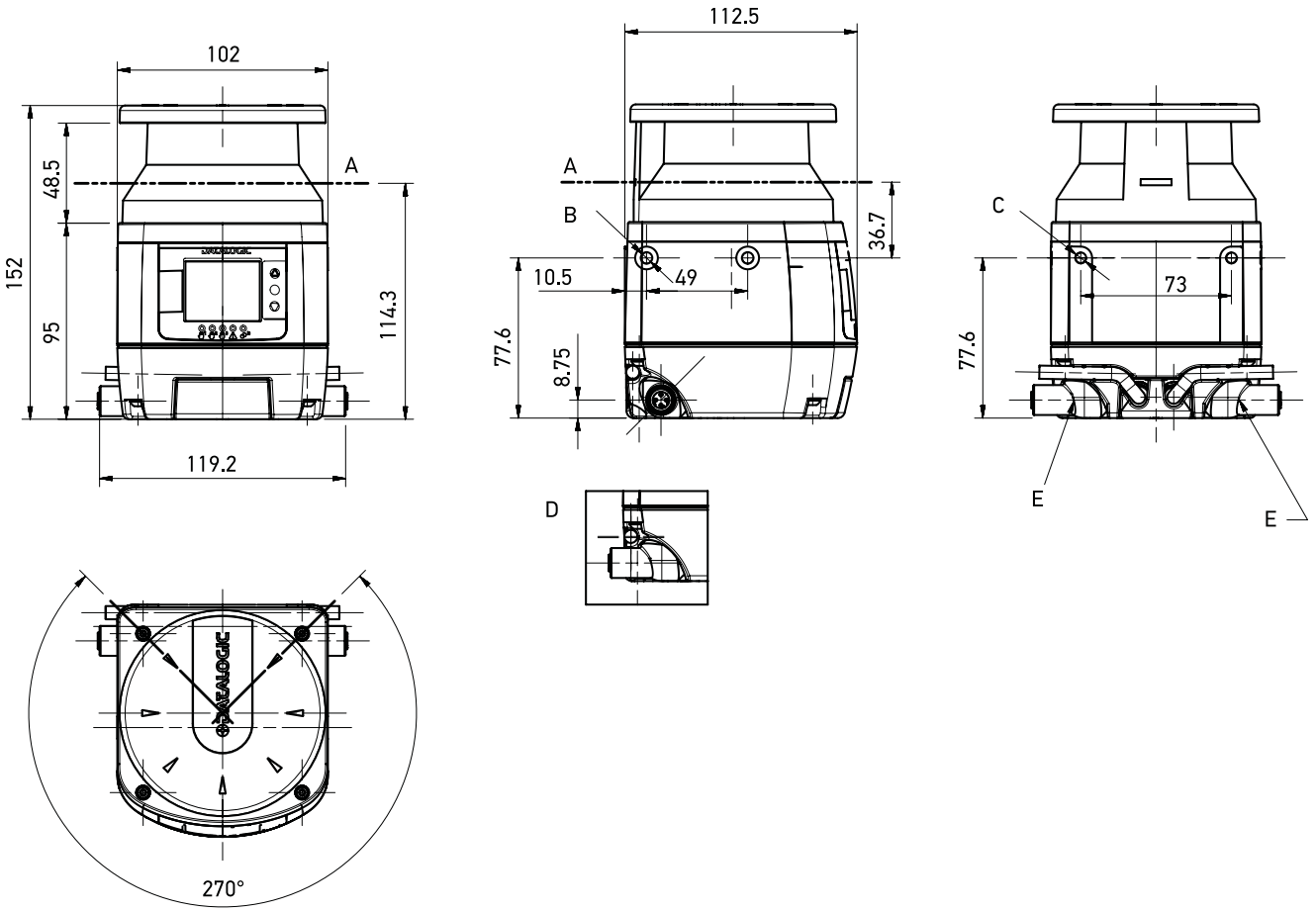


(mm)

Models	A	B	C	D	E
SLS-SA*-**	Laser plane	Female connector M12 x 1 4-poles D-code	M5 n°4 Depth Depth 8 mm	M5 n°4 Depth Depth 8 mm	Male oonnector M12 x 1 8-poles A-code

MECHANICAL DRAWINGS

SLS-M*-*-***

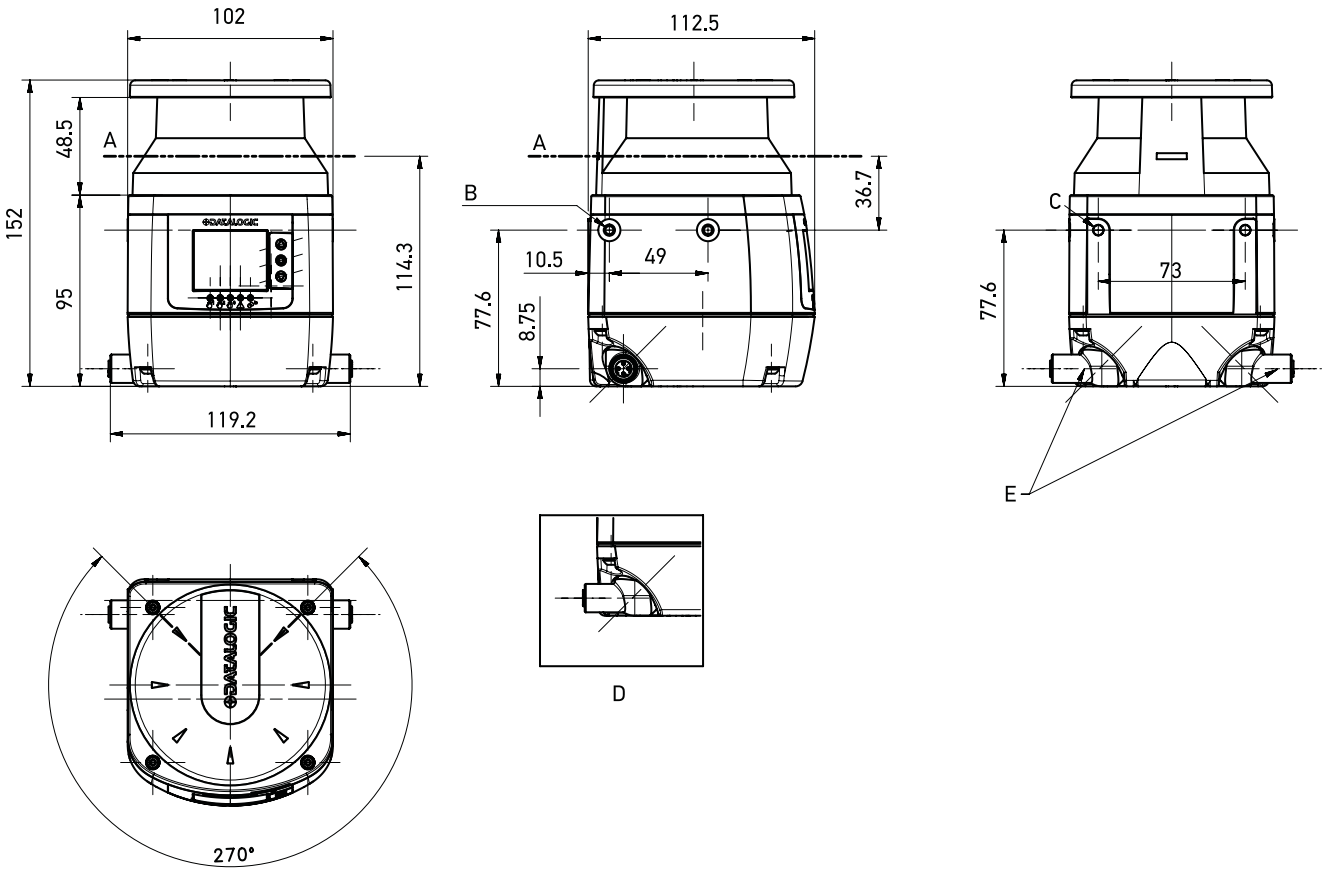


(mm)

Models	A	B	C	D	E
SLS-M*-***-*	Laser plane	M5 n°4 Depth Depth 8 mm	M5 n°2 Depth Depth 10 mm	Rotating connector 120*	Rotating connector

MECHANICAL DRAWINGS

SLS-R*-* SLS-R*_*



(mm)

Models	A	B	C	D	E
SLS-R*-*	Laser plane	M5 n°4 Depth Depth 8 mm	M5 n°2 Depth Depth 10 mm	Rotating connectors 120°	Rotating connector

ACCESSORIES

	Model	Description	Article code
Cables	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-06-U-50	Cable M12 8 poles axial female unshielded 50m UL 2464	95A252710
	CS-A1-10-U-03	Cable M12 12 poles axial female unshielded 3m UL 2464	95A252720
	CS-A1-10-U-05	Cable M12 12 poles axial female unshielded 5m UL 2464	95A252730
	CS-A1-10-U-10	Cable M12 12 poles axial female unshielded 10m UL 2464	95A252740
	CS-A1-10-U-15	Cable M12 12 poles axial female unshielded 15m UL 2464	95A252750
	CS-A1-10-U-25	Cable M12 12 poles axial female unshielded 25m UL 2464	95A252760
	CS-A1-10-U-50	Cable M12 12 poles axial female unshielded 50m UL 2464	95A252770
	CAB-ETH-M01	M12-RJ45 IP67 ethernet cable 1m	93A051346
	CAB-ETH-M01 (20 pcs)	CAB-ETH-M01 (20 pcs)	95ASE2650
	CAB-ETH-M03	M12-RJ45 IP67 ethernet cable 3m	93A051347
	CAB-ETH-M03 (20 pcs)	CAB-ETH-M03 (20 pcs)	95ASE2660
	CAB-ETH-M05	M12-RJ45 IP67 ethernet cable 5m	93A051348
	CAB-ETH-M05 (10 pcs)	CAB-ETH-M05 (10 pcs)	95ASE2670
	CAB-ETH-M10	M12-RJ45 IP67 ethernet cable 10m	93A051391
	SLS-CABLE-R-5	M12-8p M to M12-8p M cable with 5 m length for master-remote and remote-remote connection	95ASE2890
	SLS-CABLE-R-10	M12-8p M to M12-8p M cable with 10 m length for master-remote and remote-remote connection	95ASE2900
	SLS-CABLE-R-20	M12-8p M to M12-8p M cable with 20 m length for master-remote and remote-remote connection	95ASE2910
Memory groups	SLS-MG-1708	SLS-MG-1708	95ASE2950
	SLS-MG-0812	SLS-MG-0812	95ASE2960
Mounting brackets	SLS-BRACKET-A	SLS-BRACKET-A	95ASE2920
	SLS-BRACKET-B	SLS-BRACKET-B	95ASE2930
	SLS-BRACKET-C	SLS-BRACKET-C	95ASE2940
Protective windows	SLS-WINDOW	SLS-WINDOW	95ASE2971
Safety units	SE-SR2	Safety unit 3NO + 1NC outputs	95ACC6170
	CSME-03VU24-Y14	Forced guided relay interface 3NO + 1 NC	95ASE1270
Window cleaners	SLS-CLOTH	SLS-CLOTH	95ASE3000
	SLS-CLEANER	SLS-CLEANER	95ASE2990

SLS WINDOW, SLS-MG-1708 and SLS-MG-0812 are spare parts and not accessories.

DATASENSING
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NEW!

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WEBSITE

Enhanced Laser Sentinel EVO

SAFETY LASER SCANNER FOR PROFINET AND PROFISAFE



Safety laser scanner based on Time of Flight measurement with command integration in Profinet/Profisafe fieldbus

- Type 3 / PL d / SIL 2
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- Profinet-Profisafe command integration
- Up to 8 simoultaneous controlled area
- Up to 70 switchable zone sets
- Easy and fast configuration by DLSentinel Gui, including off line emulator
- Enhanced series complete set of functions

CODE DESCRIPTION

SLS - M 5 - PP - BA

series	**SLS**	Enhanced laser sentinel
model	**M**	Master, 10 zones sets
max safety range	**5**	5.5 m
Command integration	**PP**	Profinet - Profisafe
enhanced version	**BA**	Connector module on back
	BO	Connector module on bottom

TECHNICAL SPECIFICATIONS

	SLS-M5-PP-B*
FEATURES AND PERFORMANCES	
Detection capability	30/40/50/70/150 mm selectable
Angular resolution min	0.1 °
Safety range with detection capability = 30 mm min	0.05 ... 2.5m
Safety range with detection capability = 40 mm min	0.05 ... 3m
Safety range with detection capability = 50 mm min	0.05 ... 4 m
Safety range with detection capability = 70 mm min	0.05 ... 5.5m
Safety range with detection capability = 150 mm min	0.05 ... 5.5 m
Max warning zone range	40 m
Detectable target remission	1,8% .. "1000%"
max simultaneous safety zones max	8
N°of simultaneous warning zone (max)	7
N°of zone set (max)	70
N°of reference point set (max)	70
Response time max	94 ... 1750 ms (Fast Mode) 105 ms - 2065 ms (Standard Mode)
Tolerance zone	100 mm
Supplement for retroreflectors on scan plane in front of a safety zone	200 mm
ELECTRICAL DATA	
Power Supply	16.8 ... 28.8 Vdc
Power consumption	8.5 W @24 V, no digital I/O connected
VDE class protection	III (EN/IEC 61140)
POWER CONNECTOR'S CONFIGURABLE INPUT/OUTPUT	
Maximum configurable input	5
Minimum configurable input	4
COMMUNICATION	
Network Interface	10/100 Mbit/s Ethernet (3X)
PROFINET specification	V2.43
PROFIsafe specification	V2.6.1 & 2.4 (w/o iPar) / Conformance class B
GSDML specification	V2.43
CONNECTORS	
Power and I/0	M12 male type A connector - 8 poles
Ethernet to GUI / Data transmission	M12 male type D connector - 4 poles
Profinet / Profisafe	M12 male type D connector - 4 poles (2X)
HMI/UI	
Configuration and monitoring interfaces	DL Sentinel 4.0.x
LED indicators	safe/normal operation - Profinet
MECHANICAL DATA	
Dimensions	102 x 113 x 152 () mm
Material	Metal - Aluminium / PMMA
Housing material	Painted alumininium / PC
Optic window material	PMMA
ENVIRONMENTAL DATA	
Humidity	95 non-condensing
Mechanical protection	IP 65 (EN 60529)
Operating Temperature	-10 ... 50 °C
Storage temperature max.	-20 ... 70 °C
Vibrations	According to IEC 61496-1 (4.3.3.1;4.3.3.2;5.4.4.1) Class 3M7 (Stationary Use) Class 5M1 (Ground vehicle Installation)
Shocks	According to IEC 61496-1 (4.3.3.1;4.3.3.3;5.4.4.2) IEC 61496-3 (5.4.4); IEC 60068-2-75 Class 3M7 (Stationary Use) Class 5M1 (Ground vehicle Installation)

TECHNICAL SPECIFICATIONS

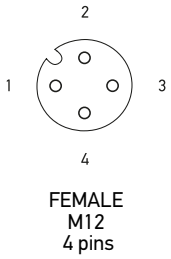
	SLS-M5-PP-B*
OPTICAL DATA	
Laser wavelenght	905 nm
Laser Pulse duration	3 ns
Laser class	1 (EN 60825-1:2014)
SAFETY PARAMETERS	
Type	3
SIL	SIL 2 (IEC 61508)
Cat.	3 (EN ISO 13849-1)
PFHd	2.24 x 10-8
MTTFd	61 years
Mission Time (TM)	20 years (EN ISO 13849-1)
FUNCTIONS	
Generic Alarm	Available
Clean Window Alarm	Available
Muting enable	Availabe
Override	Available
Dust Filtering	Available
EDM (External Device Monitoring)	Not Available
Partial / dynamic Muting for first OSSD	Available
Pre-alarm (warning)	Available
Advanced data transfer protocol	Available
Reset (restart cycle)	Available
Shut off (mute)	Available
Manual / automatic restart	Available
Points of reference	Available
Encoder input	Not Available

AVAILABLE MODELS

Description	Model
Profinet / Profisafe command integration, long range back connected	**SLS-M5-PP-BA** (958000012)
Profinet / Profisafe command integration, long range bottom connected	**SLS-M5-PP-BO** (958000013)

CONNECTIONS

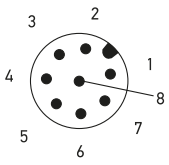
SLS-M5-PP-B*



FEMALE
M12
4 pins

1	Transmit data+	
2	Receive data+	
3	Transmit data-	
4	Receive data-	

SLS-M5-PP-B*

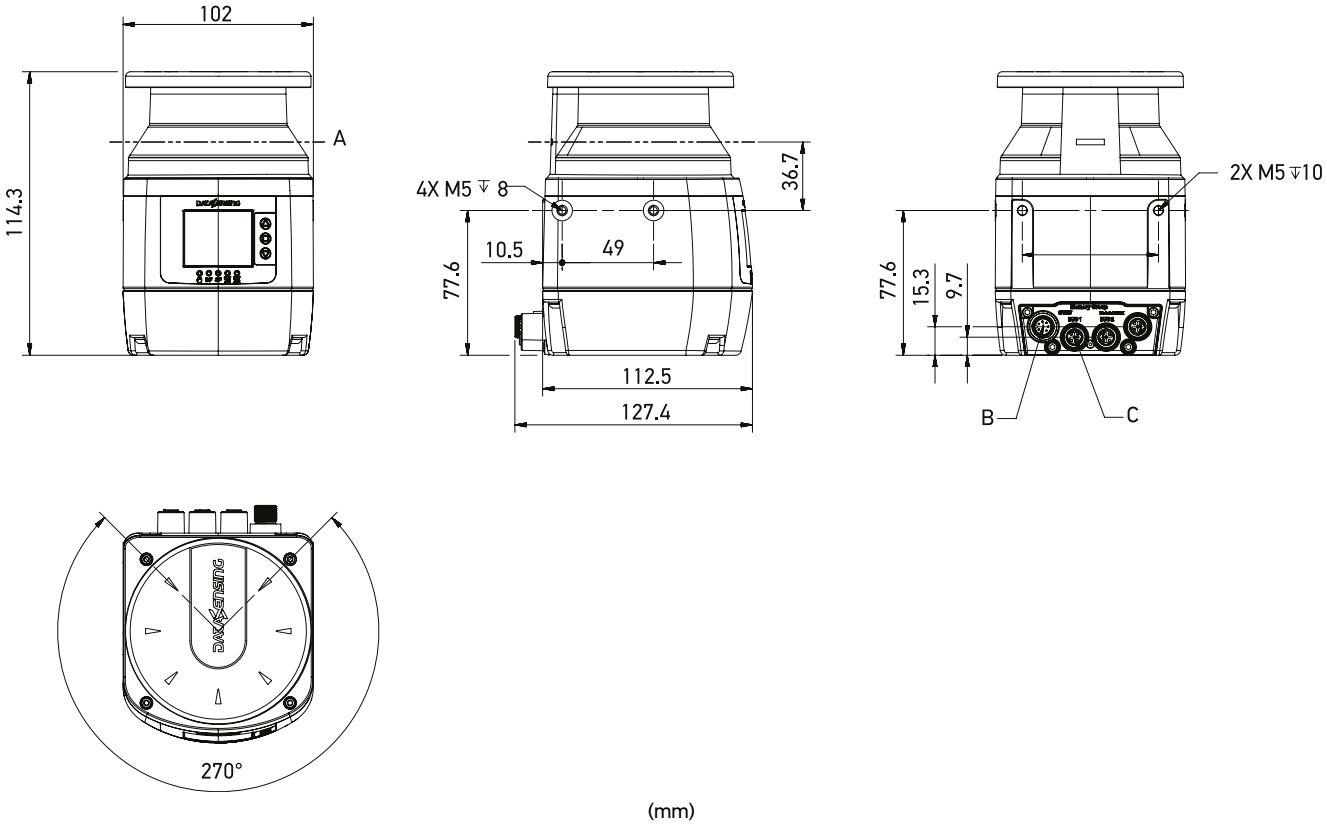


MALE
M12
8 pins

1	White	24Vdc
2	Brown	0V
3	Green	SELECTABLE BY GUI
4	Yellow	SELECTABLE BY GUI
5	Grey	SELECTABLE BY GUI
6	Pink	SELECTABLE BY GUI
7	Blue	SELECTABLE BY GUI
8	Red	Functional earth

MECHANICAL DRAWINGS

SLS-M5-PP-BA

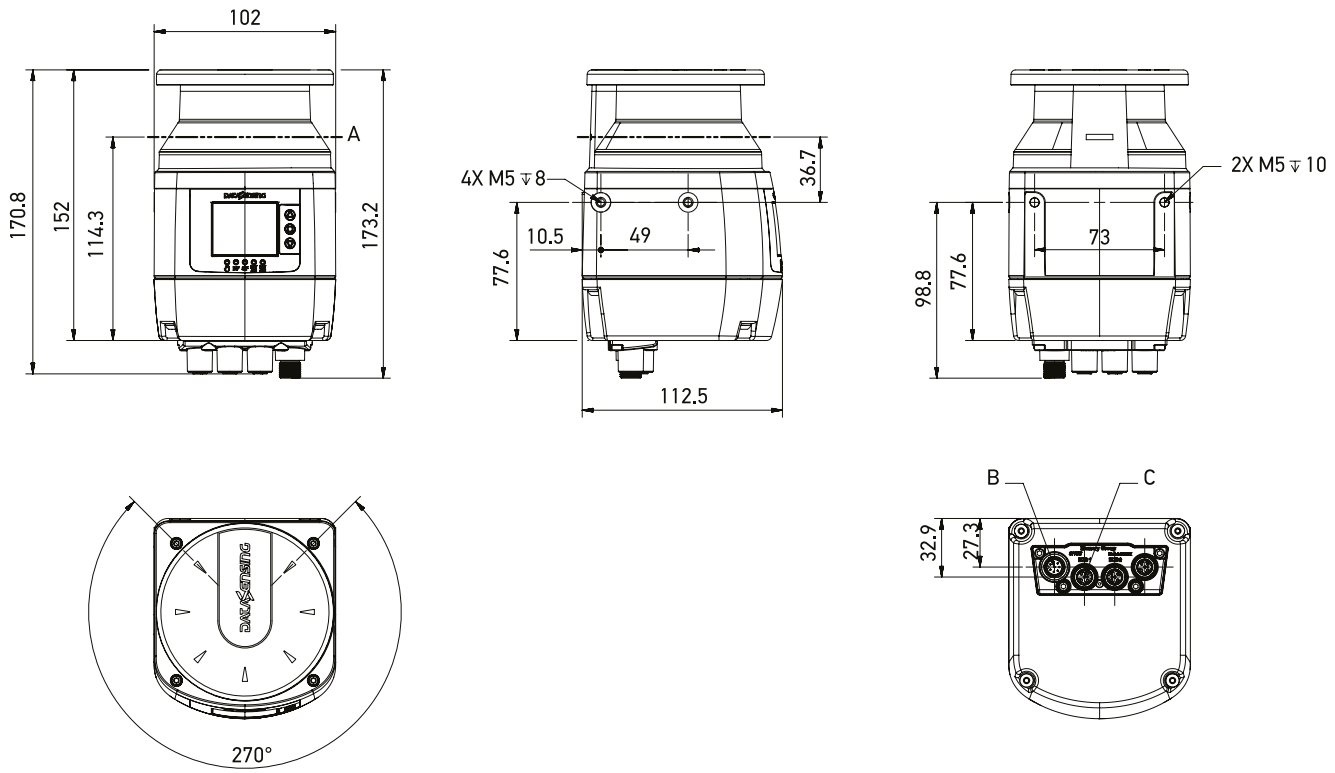


(mm)

Model	A	B	C
SLS-M5-PP-BA	Laser plane	M12 x 1 Male A-coded 8-poles	3X M12 x 1 Female D-Coded 5-poles

MECHANICAL DRAWINGS

SLS-M5-PP-B0



(mm)

Model	A	B	C
SLS-M5-PP-B0	Laser plane	M12 x 1 Male A-coded 8-poles	3X M12 x 1 Female D-Coded 5-poles

ACCESSORIES TO BE ORDERED SEPARATELY

	Model	Description	Article code
Cables	SLS-CABLE-R-5	SLS-CABLE-R-5	95ASE2890
	SLS-CABLE-R-10	SLS-CABLE-R-10	95ASE2900
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	SLS-CABLE-R-20	SLS-CABLE-R-20	95ASE2910
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CAB-ETH-M01	CAB-ETH-M01 M12-IP67 ETHERNET CABLE (1M)	93A051346
	CAB-ETH-M03	CAB-ETH-M03 M12-IP67 ETHERNET CABLE (3M)	93A051347
	CAB-ETH-M05	CAB-ETH-M05 M12-IP67 ETHERNET CABLE (5M)	93A051348
	CAB-ETH-M10	CAB-ETH-M10 M12-IP67 ETHERNET CAB. (10M)	93A051391
Memory groups	SLS-MG-FBUS	Memory group fieldbus model	95ASE0105
Mounting brackets	SLS-BRACKET-A	SLS-BRACKET-A	95ASE2920
	SLS-BRACKET-B	SLS-BRACKET-B	95ASE2930
	SLS-BRACKET-C	SLS-BRACKET-C	95ASE2940
Protective windows	SLS-WINDOW	SLS-WINDOW	95ASE2971
Window cleaners	SLS-CLOTH	SLS-CLOTH	95ASE3000

DATASENSING
easing automation challenges





ACCESSORIES

CS

CABLES FOR SENSORS



The right connection for your photoelectric sensor for industrial environment

- M8 and M12, axial or radial female connectors
- Standard length cables: 2, 3, 5, 7, 10, 15, 25 or 50 m
- 3, 4, 5, 8 or 12 poles
- Shielded or unshielded models
- P.U.R. coated models for use in harsh environments
- P.V.C. coated models for standard use
- Standard M12 4 pole non-cabled connectors
- The cable jacket maybe marked 300 V only as insulation voltage between wires, the operational voltage is 24 Vdc or 10-30 Vdc, less than 80 V required by CCC-China

235

CV

CABLES FOR SENSORS



The right connection for your photoelectric sensor for industrial environment

- M8 and M12, axial or radial female connectors
- Standard length cables: 2, 3, 5, 7, 10, 15, 25 or 50 m
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- P.V.C. coated models for standard use
- Standard M12 4 pole non-cabled connectors
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239

CD

M8, M12 CONNECTION CABLES



IP69K

241

INTERACTIVE INDEX

SLS



M12-8p M to M12-8p M cable with (5 or 10 or 20) m length for master-remote and remote-remote connection

245

CAB-ETH-M

MONITORING AND PROGRAMMING ETHERNET CABLE



247

ST

MOUNTING BRACKET



AISI316L

- Fixing brackets for universal sensors
- Fixed supports for tubular M18 sensors
- Supports with optic axis regulation
- Good shock and vibration resistance

249

ST-K

BRACKETS FOR SAFETY LIGHT CURTAINS



Aluminum brackets for safety light curtains series SG

- Angular fixing brackets for side mounting
- Rotating brackets for top-bottom mounting
- Supports for orientation of angular brackets
- Antivibration supports for angular brackets

253

SLS-BRACKET

COMPLETE BRACKET SYSTEM



SLS mount bracket

- Complete bracket system
- Pitch regulation bracket system
- Head protective bracket

259

CS-ME

FORCIBLY GUIDED RELAY INTERFACE



CS-ME is an interface with two forcibly guided relays, providing 3 NO contacts. The diagnostic function must be performed by the Safety Light Curtains through External Device Monitoring function.

- Pl e, SIL 3 Relay Interface
- 3 NO + 1 NC relays contacts
- Operating temperature: -25 ... +55°C
- Automatic restart

263

SE-SR2

SAFETY UNIT WITH 3 NO AND 1 NC RELAY OUTPUTS



Safety unit SE-SR2 can be used in combination with all Safety Light Curtains.
It can be configured to work in automatic or manual restart, and can monitor external devices.

- Pl e, SIL 3 Safety Unit
- 3 NO + 1 NC relays contacts
- Operating temperature: -10 ... +55°C
- Auto/Manual restart, EDM

267

Laser Pointers

LASER POINTERS FOR SAFETY LIGHT CURTAINS ALIGNMENT



Class 2 red laser pointer to be used to help the mechanical alignment of TX and RX unit of safety light curtain

- SH-LP: with fast plastic clamping bracket, compatible with SH4, SG2, SG4, SG4 EXTENDED, SG COMPACT BODY
- SG-LP: with regulable metal bracket compatible with SG2, SG4, SG4 EXTENDED, SG COMPACT BODY, SG BODY BIG, SG REFLECTOR

269

TP

TEST PIECES FOR SAFETY LIGHT CURTAINS



Black metal cylindrical test rod to test the detection capability of safety light curtains

- Diameters: 14, 20, 24, 30, 34, 35, 40 mm

273

SG-SRT

MUTING CONNECTION BOX FOR EXTERNAL MUTING SENSORS



Interfaces for muting sensors and safety light curtains with redundant forcibly guided relays, restart and override commands and muting indication.
SG-SRT1 and SG-SRT2 are interfaces provided with redundant forcibly guided relays, supplying a ready operator interface to restart or override the Safety Light Curtain, and have muting indication.

-

275

SG/SH
Integrated muting arms

MUTING ARMS FOR SG AND SH SAFETY LIGHT CURTAINS



Muting arms with preinstalled and prewired muting sensors, to be used in combination with SG and SH4 safety light curtains with integrated muting function

- Active/Passive models up to 3 m
- Emitter/Receiver models up to 7 m
- 4 parallel beams for bidirectional muting
- 2 parallel beams for monodirectional muting

277

SG-M

FLEXIBLE MUTING ARMS KITS FOR SAFETY LIGHT CURTAINS



Modular, ready-to-use muting sensor kit for flexible installation.

- Pre-assembled arms with sensors mounted on adjustable brackets
- Kits for T muting (4 beams) or L and X muting (2 beams)
- Retroreflective sensors S100 or S8 with intensity regulation
- Cables protected inside the metallic arms
- Fast connection to the light curtain through SG-M-CB connection box

- Palletizers / Depalletizers
- Conveyor lines

281

LMS

MUTING LAMPS



Depending on the risk assessment, an indicator showing when the muting function of a safety light curtain is active can be necessary.

- Yellow indicator with incandescent 24 V incandescence lamp
- Accessories for horizontal or vertical mounting

287

SG-PSB & PSM

STANDS FOR SAFETY LIGHT CURTAINS AND ADJUSTABLE MIRRORS



Robust protective stands for SG and SH4 safety light curtains and SG-DM mirrors. Version with pre-installed adjustable mirros for perimetral protection using 2, 3, 4 beams light curtains.

- Heights from 600 to 1900 mm (stands)
- Heights of 500, 800, 900 and 1200 mm (with 2/3/4 adjustable mirrors)
- Optional plate with springs

289

SG-DM

DEVIATING MIRRORS FOR SAFETY LIGHT CURTAINS



Mirrors for safety light curtains with finger/hand resolution.
They can be installed in protective stands SG-PSB or floor columns SE-S.

- Heights from 600 to 1900 mm
- Mirror for single beam 150 mm high

293

SE-S

FLOOR SUPPORTS FOR SAFETY LIGHT CURTAINS



The floor supports SE-S can be used to install safety light curtains of series SG and SH4, or mirrors SG-DM.

- Available heights: 800, 1000, 1200, 1500, 1800 mm

297

SG-IP69K

PLASTIC IP69K PROTECTION TUBES FOR SG SAFETY LIGHT CURTAINS



IP69K

PMMA acrylic tubes used to protect and seal safety light curtains of series SG2 BASE; SG2 EXTENDED, SG4, SG4 BODY COMPACT.

- Heights from 150 to 1800 mm (finger/hand)
- Heights of 500, 800, 900 and 1200 mm (body)
- Compatible with SG2 BASE; SG2 EXTENDED, SG4, SG4 BODY COMPACT

299

SH4 PLUGS



Spare parts can be ordered in substitution of the parts included in SH4 family safety light curtains.

301

SH

SH4 REFLECTIVE TARGET FOR LED INTEGRATED POINTER



Retroreflective target for SH4 Body Advanced Alignment

-

305

SLS-MG



SLS memory group spare part for configuration and firmware backup suitable for SLS fast replacement in field.

SLS WINDOW

REPLACEMENT WINDOW



SLS Optical Window spare parts.

SLS



WEBSITE

CS

CABLES FOR SENSORS



The right connection for your photoelectric sensor for industrial environment

- M8 and M12, axial or radial female connectors
- Standard length cables: 2, 3, 5, 7, 10, 15, 25 or 50 m
- 3, 4, 5, 8 or 12 poles
- Shielded or unshielded models
- P.U.R. coated models for use in harsh environments
- P.V.C. coated models for standard use
- Standard M12 4 pole non-cabled connectors
- The cable jacket maybe marked 300 V only as insulation voltage between wires, the operational voltage is 24 Vdc or 10-30 Vdc, less than 80 V required by CCC-China

CODE DESCRIPTION

CS - A1 - 01 - B - 03

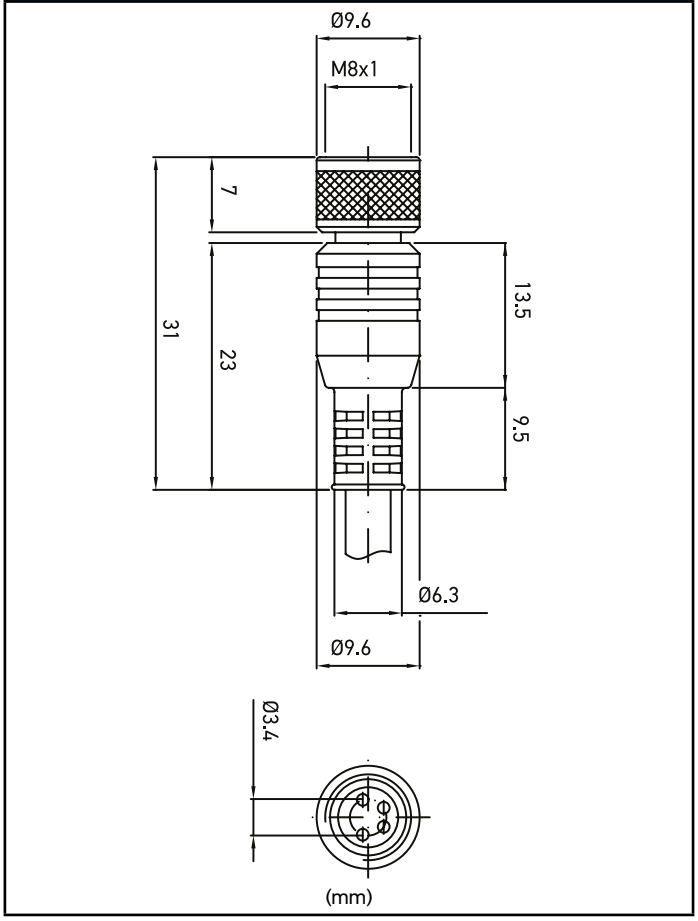
series	**CS**	Connection cables
connection	**A1**	M12, axial, female
	A2	M12, radial, female
	B1	M8, axial, female
	B2	M8, radial, female
	F1	custom female + custom female (for SG4 Extended cascade)
	G1	M12 axial male + custom female connector (for SG4 Extended)
	H1	M12, axial, female + custom connector male (for SLIM cascade)
	H2	
	I1	
	M1	M8 axial female, M12 axial male
	R1	2 x M12, axial, male + custom female (for SG4 Extended muting)
pins	**01**	3 poli, normalmente aperto, senza led, no calza
	02	4 poles, not shielded
	03	5 poles, not shielded
	06	6 poles, not shielded
	10	10 poles, not shielded
	11	3 poli, normalmente aperto, con led, PNP, no calza
	12	4 poli, con led, PNP, no calza
	15	17 poles, not shielded
	40	
	50	18 poles + 5 poles, not shielded
	70	18 poles + 5 poles, not shielded
	75	18 poles + 12 poles, not shielded
	80	18 poles + 18 poles, not shielded
material	**B**	Black
	G	PVC Grey RAL 7035
	O	OIL RESISTANCE (CEI 2034-01)
	R	PUR
length	**U**	PVC Black UL STYLE 2464
	0005	5 cm
	001	10 cm
	002	20 cm
	004	40 cm
	005	50 cm
	007	70 cm
	01	1 m
	02	2 m
	03	3 m
	5	5 m
	7	7 m
	10	10 m
	15	15 m
	25	25 m
	50	50 m
	NC	connector without cable

AVAILABLE MODELS

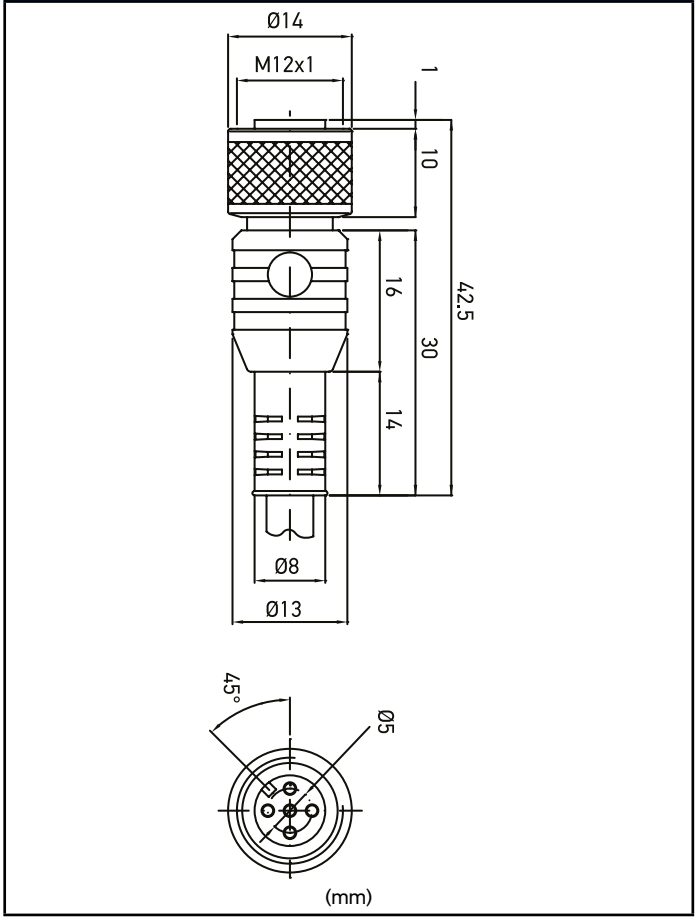
Connector	Number of poles	Cable material	Dimensions	Model
M8	4	PVC (Grey)	3 m	**CS-B1-02-G-03** (95A251420)
			5 m	**CS-B1-02-G-05** (95A251430)
			10 m	**CS-B1-02-G-10** (95A251480)
M12	4	PVC UL style 2464	5 m	**CS-A1-02-U-05** (95ASE1130)
			10 m	**CS-A1-02-U-10** (95ASE1140)
			15 m	**CS-A1-02-U-15** (95ASE1150)
			25 m	**CS-A1-02-U-25** (95ASE1160)
	5		5 m	**CS-A1-03-U-05** (95ASE1180)
			10 m	**CS-A1-03-U-10** (95ASE1190)
			15 m	**CS-A1-03-U-15** (95ASE1200)
			25 m	**CS-A1-03-U-25** (95ASE1210)
			50 m	**CS-A1-03-U-50** (95A252700)
		Plastic - TPU	1 m	**CS-H2-03-B-01** (95ASE0031)
			3 m	**CS-H2-03-B-03** (95ASE0032)
			10 m	**CS-H2-03-B-10** (95ASE0033)
		Plastic - PVC	0.2 m	**CS-G1-50-B-002** (95A252820)
	5+12-poles		0.2 m	**CS-R1-75-B-002** (95A252810)
	8	PVC UL style 2464	3 m	**CS-A1-06-U-03** (95ASE1220)
			5 m	**CS-A1-06-U-05** (95ASE1230)
			10 m	**CS-A1-06-U-10** (95ASE1240)
			15 m	**CS-A1-06-U-15** (95ASE1250)
			25 m	**CS-A1-06-U-25** (95ASE1260)
			50 m	**CS-A1-06-U-50** (95A252710)
	12		3 m	**CS-A1-10-U-03** (95A252720)
			5 m	**CS-A1-10-U-05** (95A252730)
			10 m	**CS-A1-10-U-10** (95A252740)
			15 m	**CS-A1-10-U-15** (95A252750)
			25 m	**CS-A1-10-U-25** (95A252760)
			50 m	**CS-A1-10-U-50** (95A252770)

MECHANICAL DRAWINGS

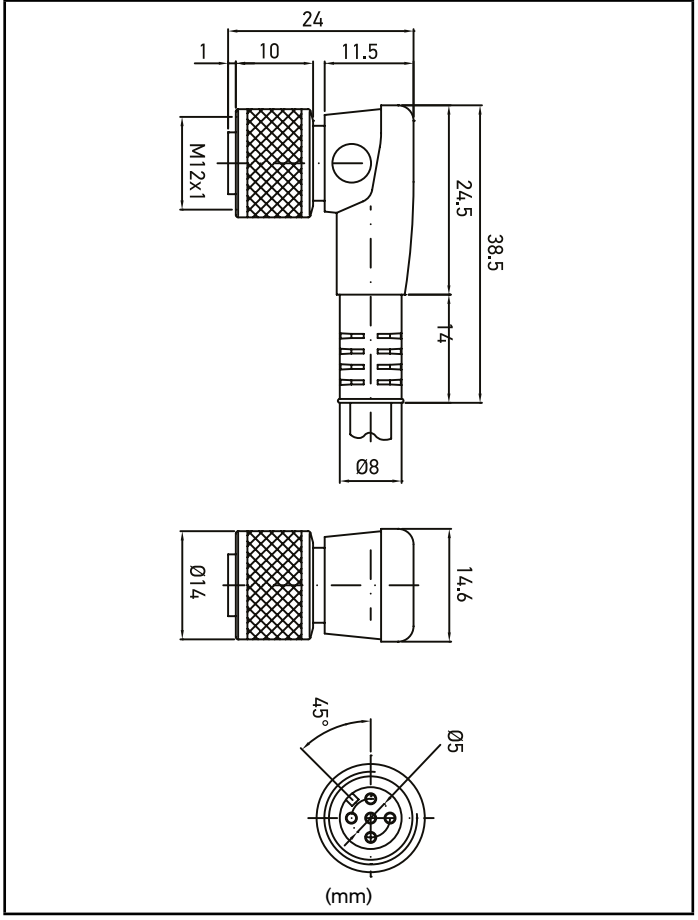
CS-B1-**-*-*-** M8 Axial



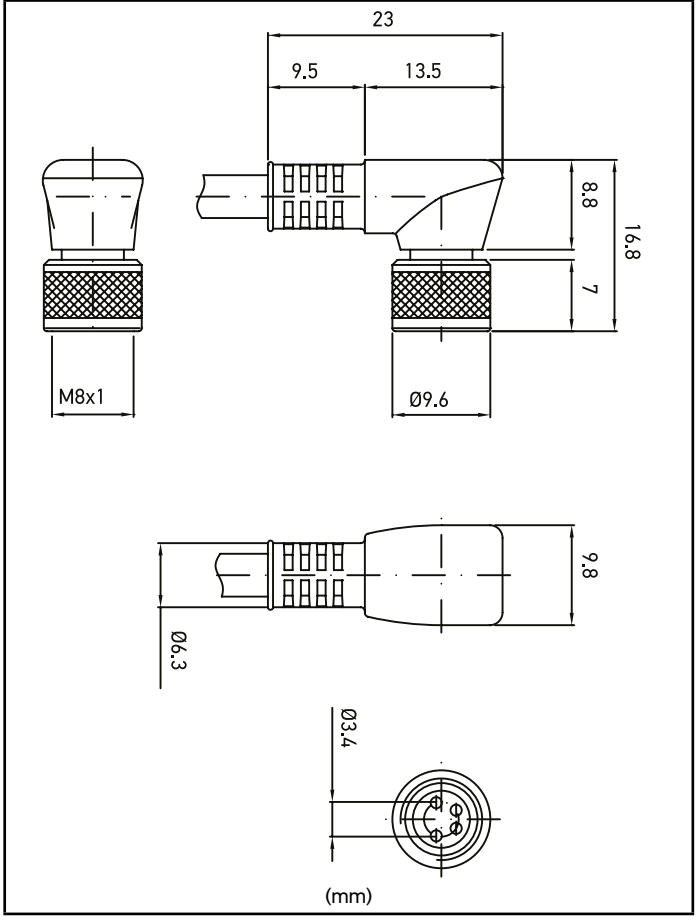
CS-A1-**-*-*-** M12 axial



CS-*2-**-*-*-** M12 radial

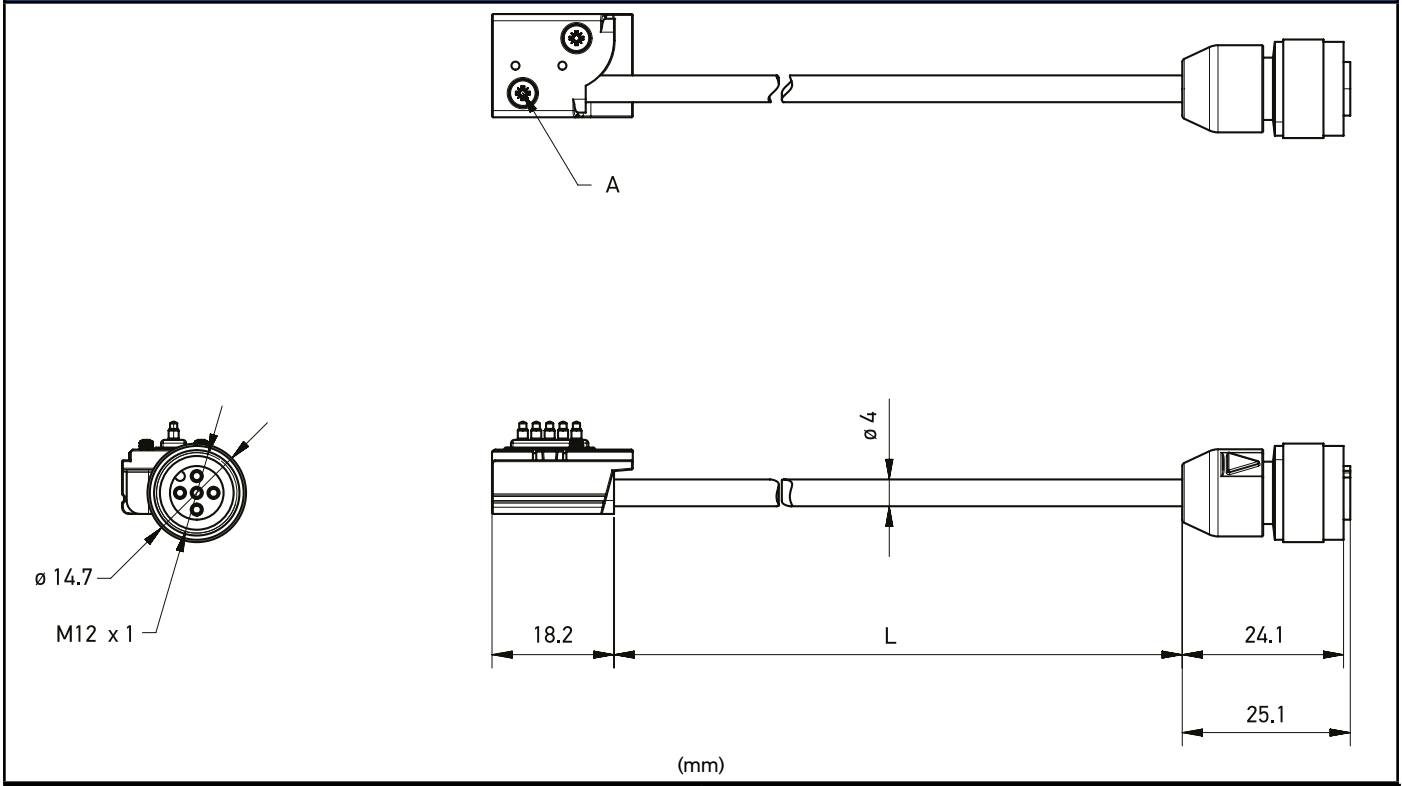


CS-B2-**-*-*-** M8 radial



MECHANICAL DRAWINGS

CS-H1-03-B-*** Cascade cables



(mm)

Cascade cables	L (mm)
CS-H1-03-B-001	90 ±10
CS-H1-03-B-005	490 ±10
CS-H1-03-B-01	990 ±10

WEBSITE

CV

CABLES FOR SENSORS



The right connection for your photoelectric sensor for industrial environment

- M8 and M12, axial or radial female connectors
- Standard length cables: 2, 3, 5, 7, 10, 15, 25 or 50 m
- 3, 4, 5, 8 or 12 poles
- Shielded or unshielded models
- P.U.R. coated models for use in harsh environments
- P.V.C. coated models for standard use
- Standard M12 4 pole non-cabled connectors
- The cable jacket maybe marked 300 V only as insulation voltage between wires, the operational voltage is 24 Vdc or 10-30 Vdc, less than 80 V required by CCC-China

CODE DESCRIPTION

CV - A1 - 02 - B - 007

series	**CV**	Connection cables
connection	**A1**	M12, axial, female
	A2	M12, radial, female
	L1	M12, axial, female + M12 radial, female
	L2	M12, axial, male + M12 radial, female
	Y1	M12, axial, female + 2 M12 radial, female
	Y4	M12, axial, male + 2 M12 radial, female
pins	**02**	4 poles, not shielded
	22	4 poles, shielded
	26	8 poles, shielded
material	**B**	Black
	G	Grey
length	**007**	7 cm
	03	3 m
	05	5 m
	10	10 m
	15	15 m
	25	25 m

AVAILABLE MODELS

Connector	Number of poles	Cable material	Dimensions	Model
M12	4	Plastic - PVC	0.7 m length	**CV-Y1-02-B-007** (95ACC2560)
				CV-L1-02-B-007 (95ACC2570)
				CV-Y4-02-B-007 (95ASE0037)
				CV-L2-02-B-007 (95ASE0038)
		PVC (Black)	3 m length	**CV-A1-22-B-03** (95ACC1480)
			5 m length	**CV-A1-22-B-05** (95ACC1490)
			10 m length	**CV-A1-22-B-10** (95ACC1500)
			15 m length	**CV-A1-22-B-15** (95ACC2070)
			25 m length	**CV-A1-22-B-25** (95ACC2090)
M12 8-poles	8		3 m length	**CV-A1-26-B-03** (95ACC1510)
			5 m length	**CV-A1-26-B-05** (95ACC1520)
			10 m length	**CV-A1-26-B-10** (95ACC1530)
			15 m length	**CV-A1-26-B-15** (95ACC2080)

CV-L1-02-B-007



CV-Y1-02-B-007



DATASENSING easing automation challenges

IP69K

WEBSITE

CD

M8 , M12 CONNECTION CABLES



CODE DESCRIPTION

CD 08 / 0A - 020 C 1

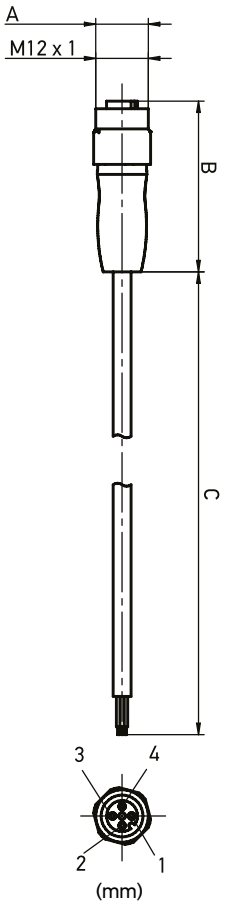
serie	**CD**	Connection cables
connection	**08**	M8 standard
	08F	M8 food
	12M	M12 standard
	12F	M12 food
pins	**0A**	3 pins
	0B	4 pins
	0H	5 pins
	0E	8 pins (wh, bn, gn, ye, gy, pk, bu, rd)
	0X	8 pins (bn, wh, bu, bk, gy, pk, vt, or)
	NA	3 pins, 2 LEDs (NPN-NO) plug
	PA	3 pins, 2 LEDs (PNP-NO) plug
	VB	4 pins, 2 LEDs (PNP-NO) plug
	DB	4 pins DECOUT bi-led plug
	LB	4 pins, 3 LEDs (PNP-NO+NC) plug
	AC	3 pins (for 1/2" 20UNF connector)
length	**010**	1 m
	020	2 m
	030	3 m
	050	5 m
	100	10 m
head format	**A**	axial female
	B	axial male
	C	90° female
	D	90° male
material	**1**	PVC
	3	PVC (5 poles)
	5	PUR
	4	PP-EPDM for F&B plugs

AVAILABLE MODELS

Connector	Number of poles	Male / Female	Cables connections material	Cables lenght	Connector head	Model
M12	3	F	PVC	2 m	Axial	CD12M/AA-020A1
					90°	CD12M/AA-020C1
				5 m	Axial	CD12M/AA-050A1
					90°	CD12M/AA-050C1
				7 m	Axial	CD12M/AA-070A1
					90°	CD12M/AA-070C1
				10 m	Axial	CD12M/AA-100A1
					90°	CD12M/AA-100C1
				15 m	Axial	CD12M/AA-150A1
					90°	CD12M/AA-150C1
				20 m		CD12M/AA-200C1
	4			2 m	Axial	CD12M/0B-020A1
					90°	CD12M/0B-020C1
				5 m	Axial	CD12M/0B-050A1
						CD-12M/0B-050A1HT
					90°	CD12M/0B-050C1
						CD12M/0B-050C1HT
				7 m	Axial	CD12M/0B-070A1
					90°	CD12M/0B-070C1
				10 m	Axial	CD12M/0B-100A1
						CD-12M/0B-100A1HT
					90°	CD12M/0B-100C1
						CD12M/0B-100C1HT
				15 m		CD12M/0B-150C1
				20 m	Axial	CD12M/0B-200A1
					90°	CD12M/0B-200C1
			PUR	2 m	Axial	CD12M/0B-020A5
					90°	CD12M/0B-020C5
				5 m	Axial	CD12M/0B-050A5
					90°	CD12M/0B-050C5
					Axial	CD-12M/0B-050A5US
					90°	CD12M/0B-050C5US
				10 m	Axial	CD12M/0B-100A5
					90°	CD12M/0B-100C5
					Axial	CD-12M/0B-100A5US
					90°	CD12M/0B-100C5US
				15 m	Axial	CD-12M/0B-150A5US
					90°	CD12M/0B-150C5US
		M	PVC	5 m	Axial	CD12M/0B-050B1
				10 m		CD12M/0B-100B1

MECHANICAL DRAWINGS

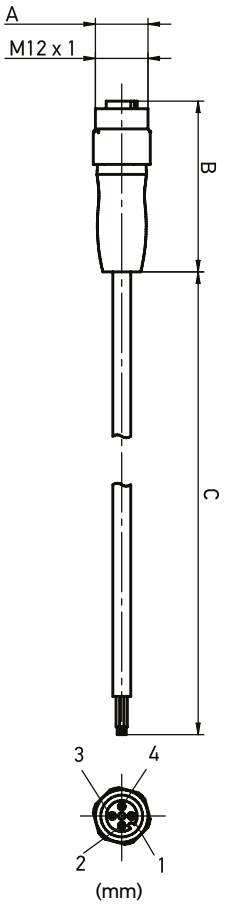
CD12M/**-***A1 M12 female, 3 poles axial cables



(mm)

Models	A (mm)	B (mm)	C (mm)
CD12M/**-020A1	ø16 max.	48 max.	2000
CD12M/**-050A1			5000
CD12M/**-070A1			7000
CD12M/**-100A1			10000
CD12M/**-150A1			15000
CD12M/0E-250A1			25000

CD12*/0B-***A* M12 female, 4 poles axial cables

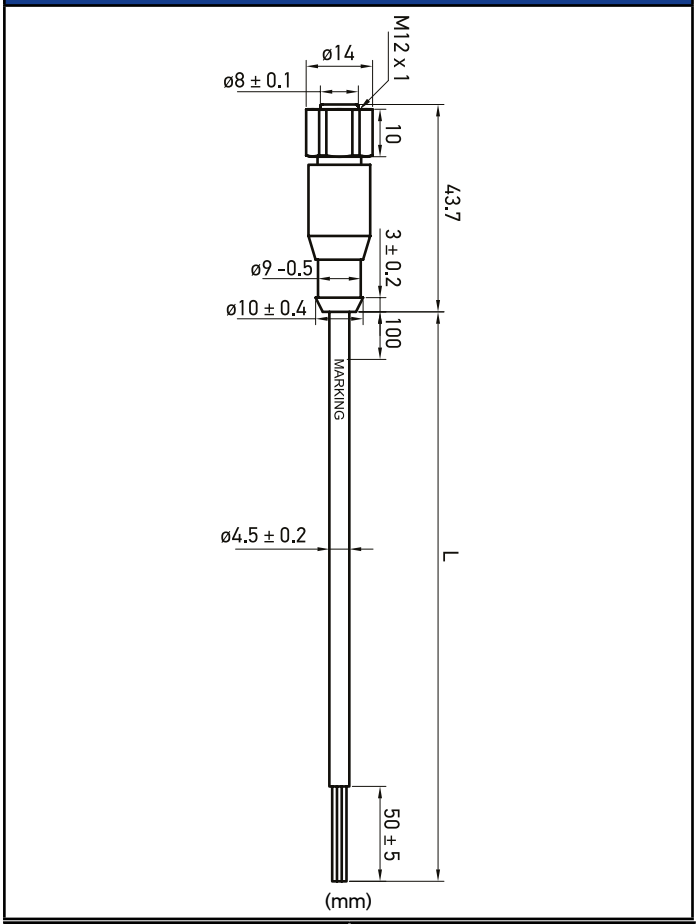


(mm)

Models	A (mm)	B (mm)	C (mm)
CD12*/0B-020A*	16 max.	48 max.	2000
CD12*/0B-050A*			5000
CD12*/0B-070A*			7000
CD12*/0B-100A*			10000
CD12*/0B-150A*			15000
CD12*/0B-200A*			20000

MECHANICAL DRAWINGS

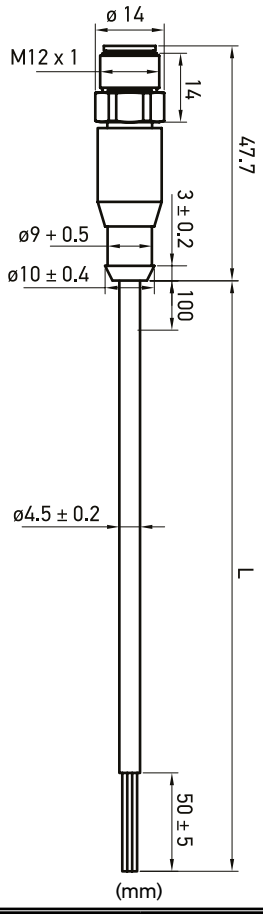
CD12M/0B-***A1



(mm)

Model	L (mm)
CD12M/0B-005A1	500 ±50
CD12M/0B-010A1	1000 ±50
CD12M/0B-015A1	1500 ±50
CD12M/0B-020A1	2000 ±50
CD12M/0B-030A1	3000 ±50
CD12M/0B-050A1	5000 ±1%
CD12M/0B-070A1	7000 ±1%
CD12M/0B-100A1	10000 ±1%
CD12M/0B-150A1	15000 ±1%
CD12M/0B-200A1	20000 ±1%
CD12M/0B-250A1	25000 ±1%
CD12M/0B-300A1	30000 ±1%

CD12M/0B-***B1



(mm)

Model	L (mm)
CD12M/0B-005B1	500 ± 50
CD12M/0B-010B1	1000 ± 50
CD12M/0B-015B1	1500 ± 50
CD12M/0B-020B1	2000 ± 50
CD12M/0B-030B1	3000 ± 50
CD12M/0B-050B1	5000 ± 50
CD12M/0B-070B1	7000 ± 50
CD12M/0B-100B1	10000 ± 50
CD12M/0B-150B1	15000 ± 50
CD12M/0B-200B1	20000 ± 50
CD12M/0B-250B1	25000 ± 50
CD12M/0B-300B1	30000 ± 50

WEBSITE

SLS



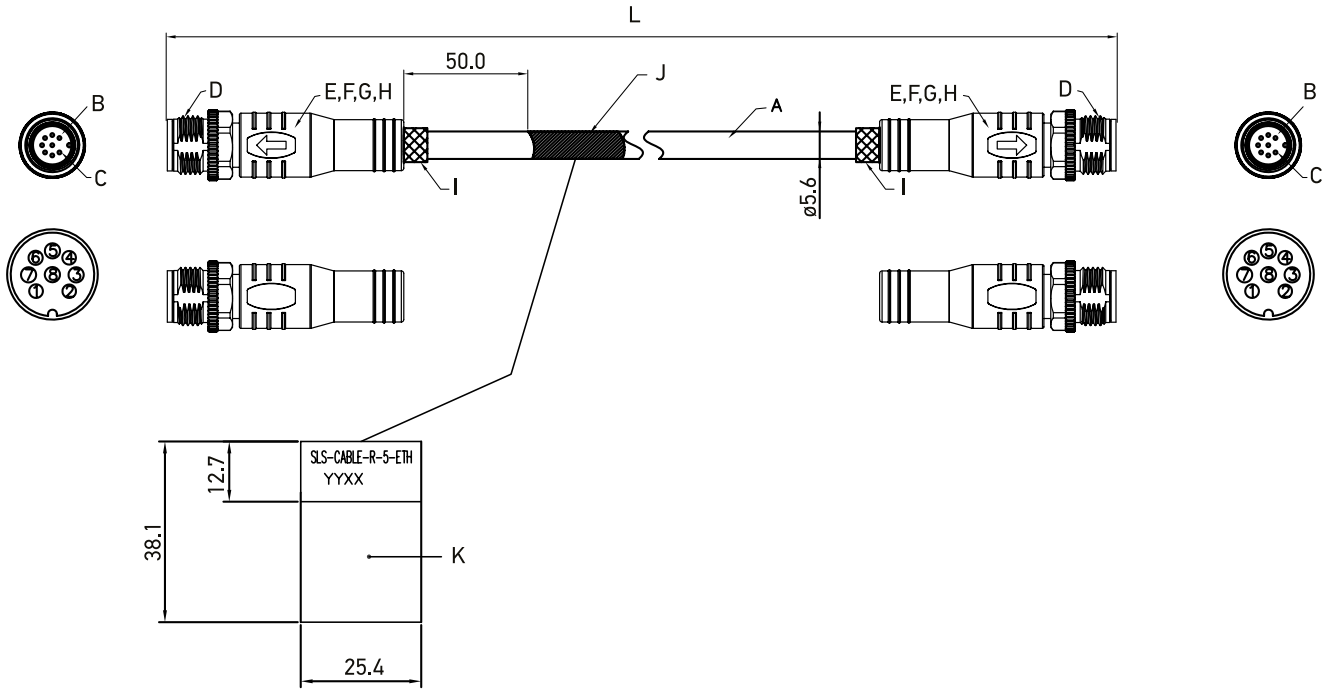
M12-8p M to M12-8p M cable with (5 or 10 or 20) m length for master-remote and remote-remote connection

AVAILABLE MODELS

Description	Model
M12-8p M to M12-8p M cable with 5 m length for master-remote and remote-remote connection	**SLS-CABLE-R-5** (95ASE2890)
M12-8p M to M12-8p M cable with 10 m length for master-remote and remote-remote connection	**SLS-CABLE-R-10** (95ASE2900)
M12-8p M to M12-8p M cable with 20 m length for master-remote and remote-remote connection	**SLS-CABLE-R-20** (95ASE2910)

MECHANICAL DRAWINGS

SLS-CABLE-R-**



(mm)

Model	A	B	C	D	E,F,G,H	I	J	K	L
SLS-CABLE-R-5	Cat5e SFTP UL2835 26AW-G*4P+AL+-D+B, black PVC jacket	M12 8P black male housing	Male terminal with gold plating	M12 *1.0 screw,-zinc, alloy with nickel plating	(E) 2 x Zinc alloy pipe for male, (F) 16 x Black heat shrinking tube ø1.5*7 mm, (G) 2 x Black heat shrinking tube ø6.0*10 mm, (H) Molded with black TPU (XX-M0799/M0801)	2 x Black heat shrinking tube	Batch label: 25.4 x 38.1	Tran-sparent portion	5 m
SLS-CABLE-R-10									10 m
SLS-CABLE-R-20									20 m

WEBSITE

CAB-ETH-M

MONITORING AND PROGRAMMING ETHERNET CABLE



CODE DESCRIPTION

CAB-ETH-M - 01

series	**CAB-ETH-M**	Ethernet cable
length	**01**	1 m
	03	3 m
	05	5 m
	10	10 m

AVAILABLE MODELS

Connector	Dimensions	Model
M12/RJ45	1 m length	**CAB-ETH-M01 (20 pcs)** (95ASE2650)
	3 m length	**CAB-ETH-M03 (20 pcs)** (95ASE2660)
	5 m length	**CAB-ETH-M05 (10 pcs)** (95ASE2670)
	1 m length	**CAB-ETH-M01** (93A051346)
	3 m length	**CAB-ETH-M03** (93A051347)
	5 m length	**CAB-ETH-M05** (93A051348)
	10 m length	**CAB-ETH-M10** (93A051391)

WEBSITE

ST
MOUNTING BRACKET



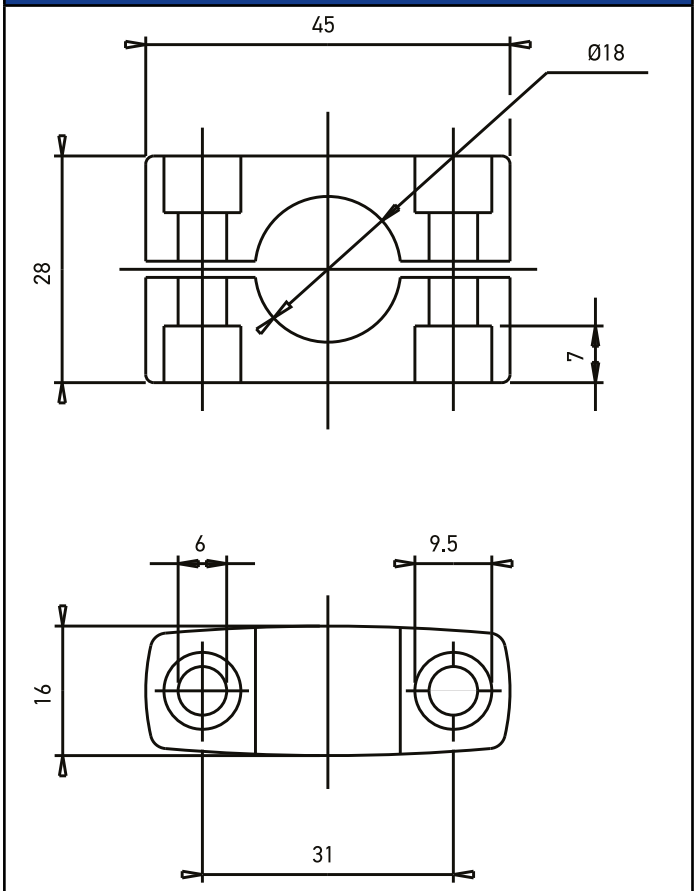
- Fixing brackets for universal sensors
- Fixed supports for tubular M18 sensors
- Supports with optic axis regulation
- Good shock and vibration resistance

AVAILABLE MODELS

Description	Model
Bracket M18 axial	**ST 18-A**
Bracket M18 axial AISI316L	**ST 18-A7W**
Bracket M18 90*	**ST 18-C**
Bracket M18	**ST 18-S**
Vertical fixing bracket	**ST 18-V**
Andi dust access. for M18	**ST 30**
Bracket M30 axial	**ST 30-A**
Bracket M30 90*	**ST 30-C**
SWING-18 = adjustable support for M18 tubular sensors	**SWING-18** (895000006)
SP-40 = Tubolar mounting bracket	**SP-40** (95ACC1370)
Bracket M18 90* AISI316L	**ST 18-C7W**
M18 PLASTIC NUT KIT	**M18 PLASTIC NUT KIT** (95ACC2380)
	M18 PLASTIC NUT KIT (G602000008)

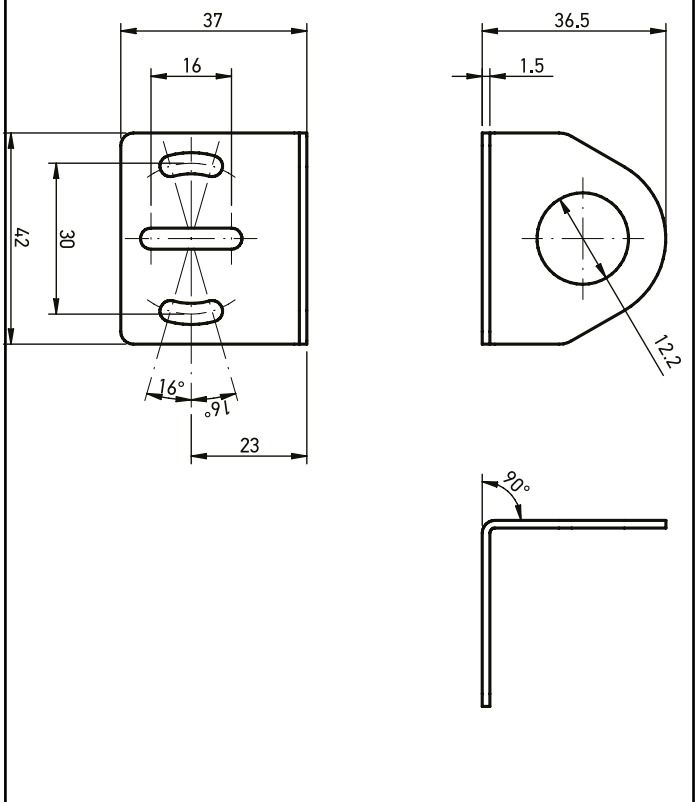
MECHANICAL DRAWINGS

SP-40



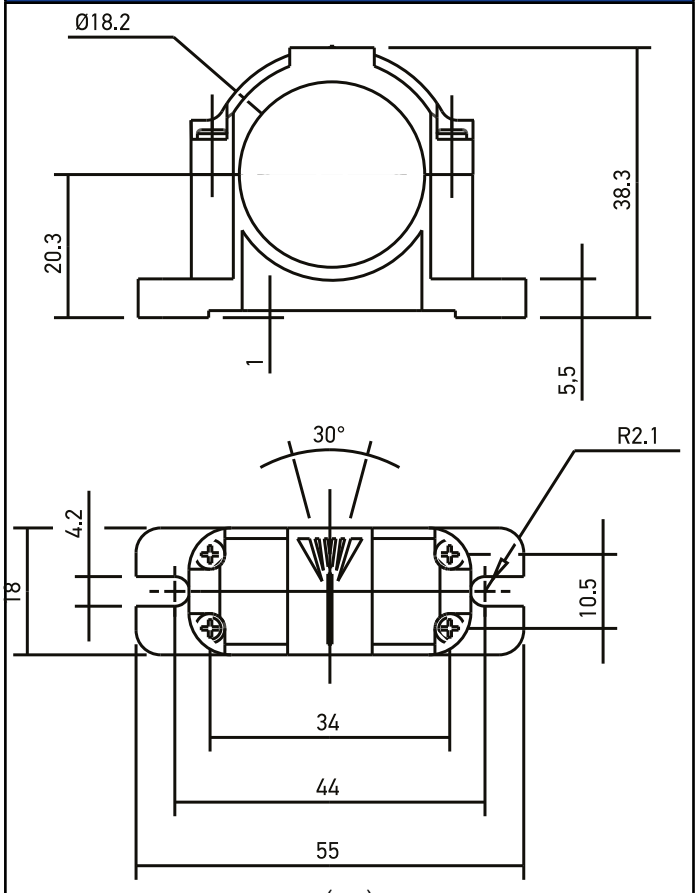
(mm)

ST 18-C



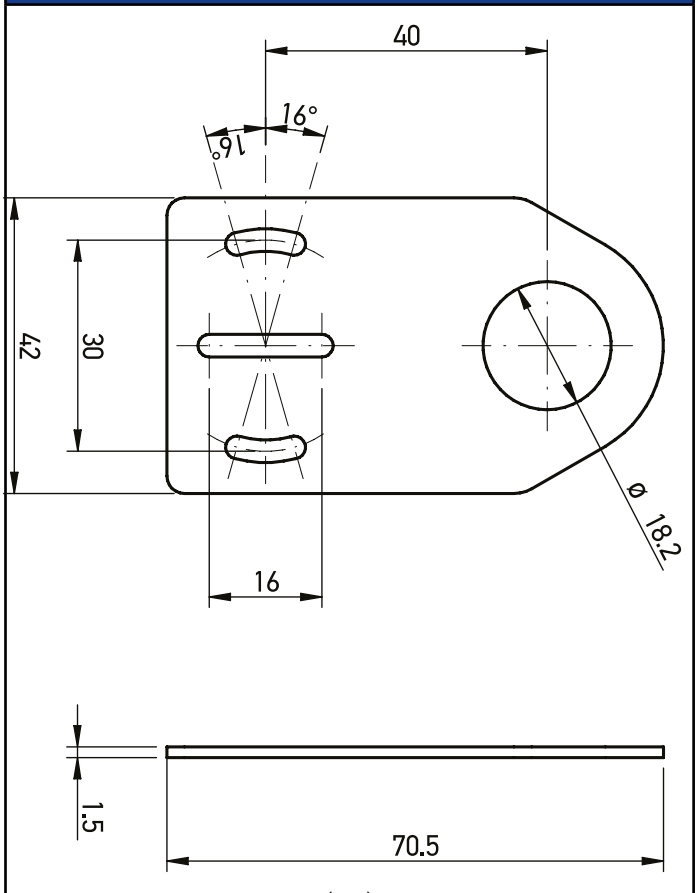
(mm)

SWING-18



(mm)

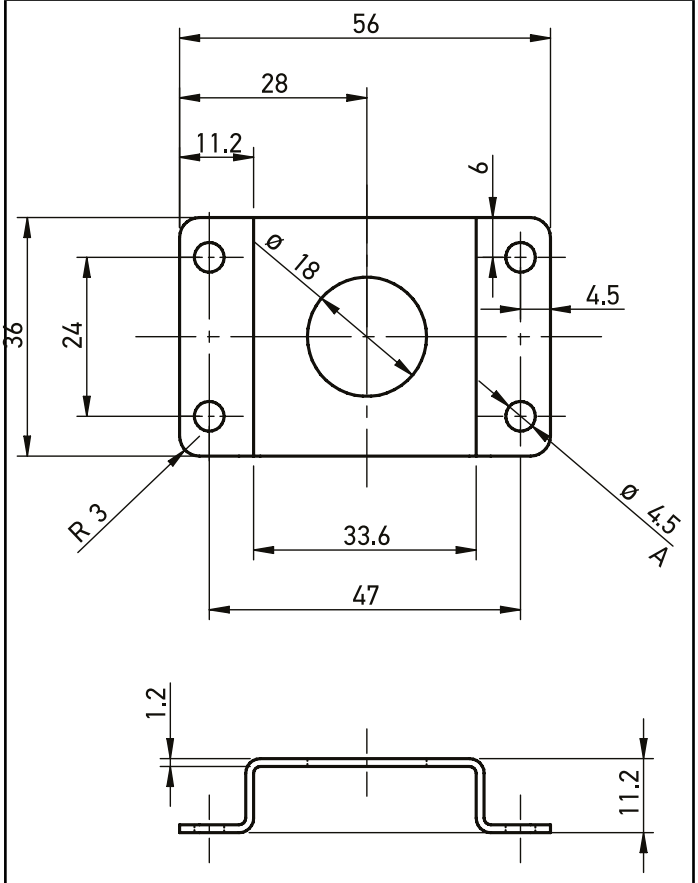
ST 18-A



(mm)

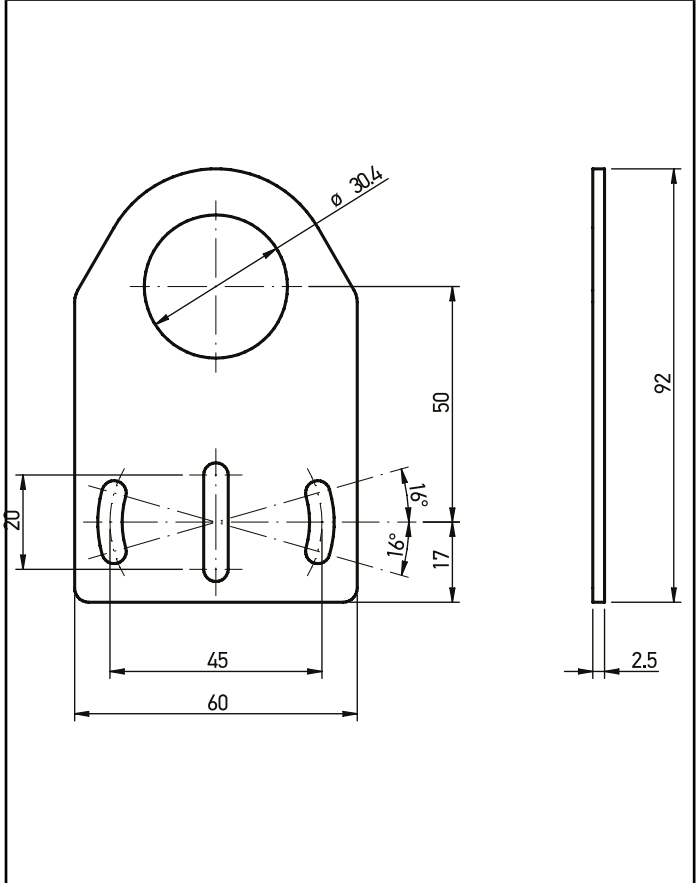
MECHANICAL DRAWINGS

ST 18-V



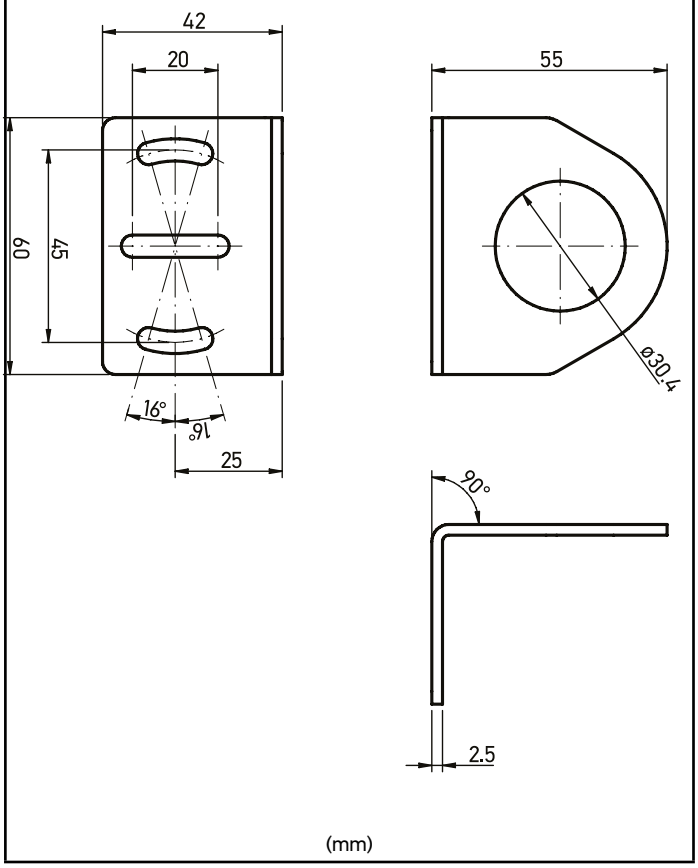
(mm)

ST 30-A



(mm)

ST 30-C



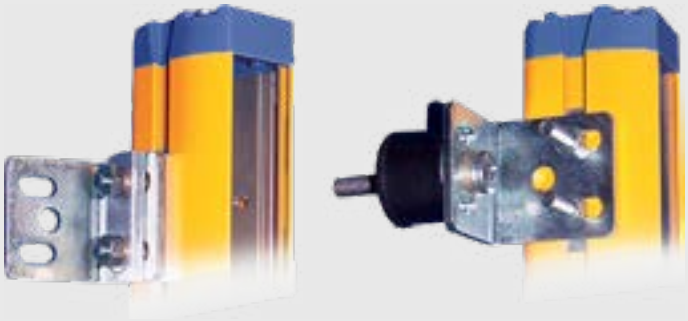
(mm)

DATASENSING
easing automation challenges

WEBSITE

ST-K

BRACKETS FOR SAFETY LIGHT CURTAINS



Aluminum brackets for safety light curtains series SG

- Angular fixing brackets for side mounting
- Rotating brackets for top-bottom mounting
- Supports for orientation of angular brackets
- Antivibration supports for angular brackets

CE UK CA

AVAILABLE MODELS

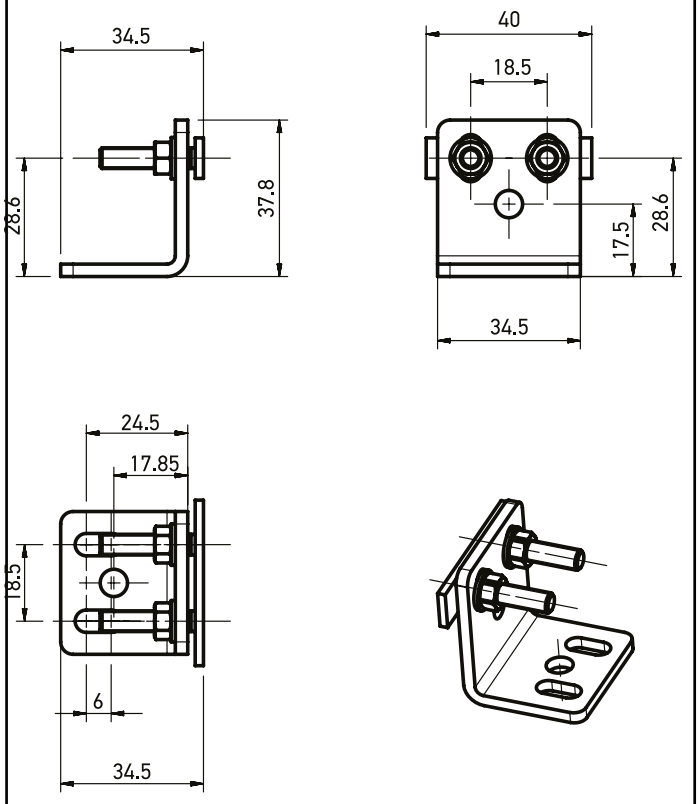
Description	Model
Metal angled brackets 4 pcs kit for SG/SH4	**ST-KSTD** (95ACC1670)
Orientable supports 4 pcs kit to be used with ST-KSTD	**ST-K4OR** (95ACC1680)
Orientable supports 6 pcs kit to be used with ST-KSTD	**ST-K6OR** (95ACC1690)
Anti vibration supports 4 pcs kit to be used with ST-KSTD	**ST-K4AV** (95ACC1700)
Anti vibration supports 6 pcs kit to be used with ST-KSTD	**ST-K6AV** (95ACC1710)
Plastic angled brackets 4 pcs kit	**ST-KP4MP** (95ASE1100)
Plastic angled brackets 6 pcs kit	**ST-KP6MP** (95ASE1110)
Metal top-bottom rotative brackets 4 pcs kit	**ST-K4ROT** (95ASE1280)
Rotating brackets for SH4 4 pcs	**ST-K4ROT-SH** (95ASE0042)
Metal angled brackets 4 pcs kit for SG BODY BIG	**ST-K4STD-SG** (95ASE1950)
Metal top-bottom rotative brackets 4 pcs kit for SG BODY BIG	**ST-K4ROT-SG BODY BIG** (95ASE1960)
Metal rear brackets 4 pcs kit for SG BODY BIG	**ST-K4REAR-SG** (95ASE1970)
Metal top-bottom rotative brackets 4 pcs kit for SG BODY COMPACT	**ST-K4ROT-SG** (95ASE2040)

AVAILABLE MODELS

Description	Model
C-shaped Brackets 2 pcs kit for SLIM	**ST-K2-SL-C** (95ASE2510)
O-shaped Brackets 4 pcs kit for SLIM	**ST-K4-SL-O** (95ASE2520)
C-shaped Orientable Brackets 2 pcs kit for SLIM	**ST-K2-SL-C-OR** (95ASE2530)
L-shaped Brackets 2 pcs kit for SLIM	**ST-K2-SL-L** (95ASE2540)
Anti vibration supports Box 30 x 4 pcs	**ST-K4AV (30 pcs)** (95ASE2770)
Orientable supports Box 30 x 4 pcs	**ST-K4OR (30 pcs)** (95ASE2780)
Metal top-bottom rotative brackets Box 30 x 4 pcs	**ST-K4ROT (30 pcs)** (95ASE2790)
Metal angled brackets Box 30 x 4 pcs	**ST-KSTD (30 pcs)** (95ASE2800)
Metal top-bottom rotative brackets 4 pcs kit for SG4 FIELDBUS	**ST-K4ROT-OP** (95ASE2840)

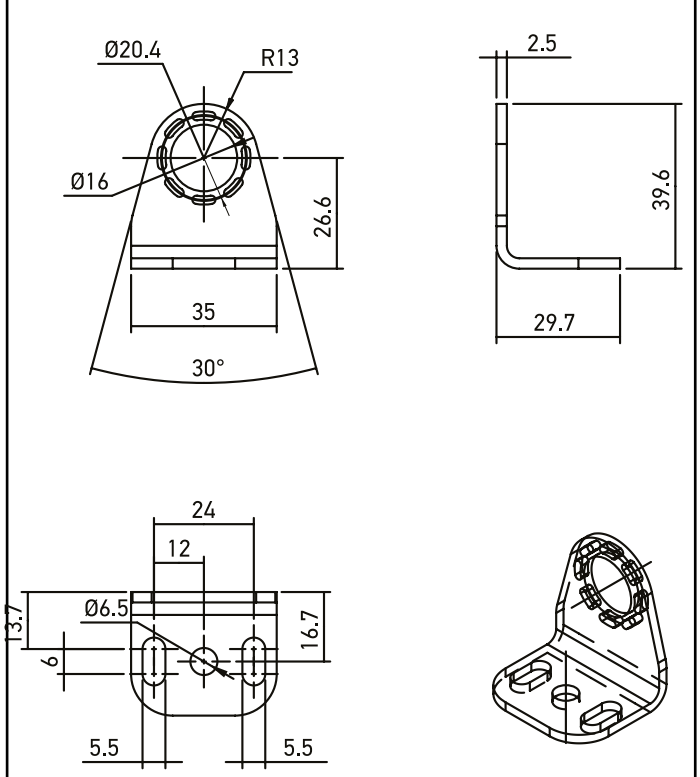
MECHANICAL DRAWINGS

ST-KSTD



(mm)

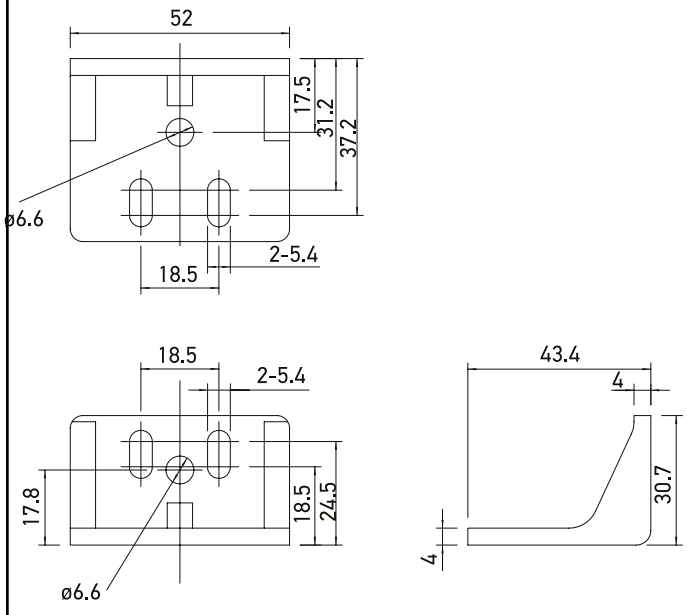
ST-K4OR



(mm)

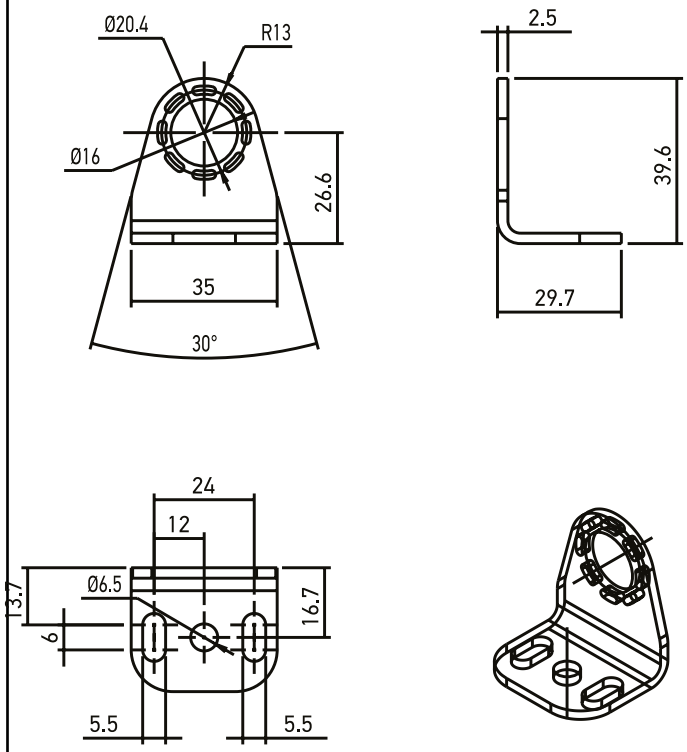
MECHANICAL DRAWINGS

ST-KP*MP



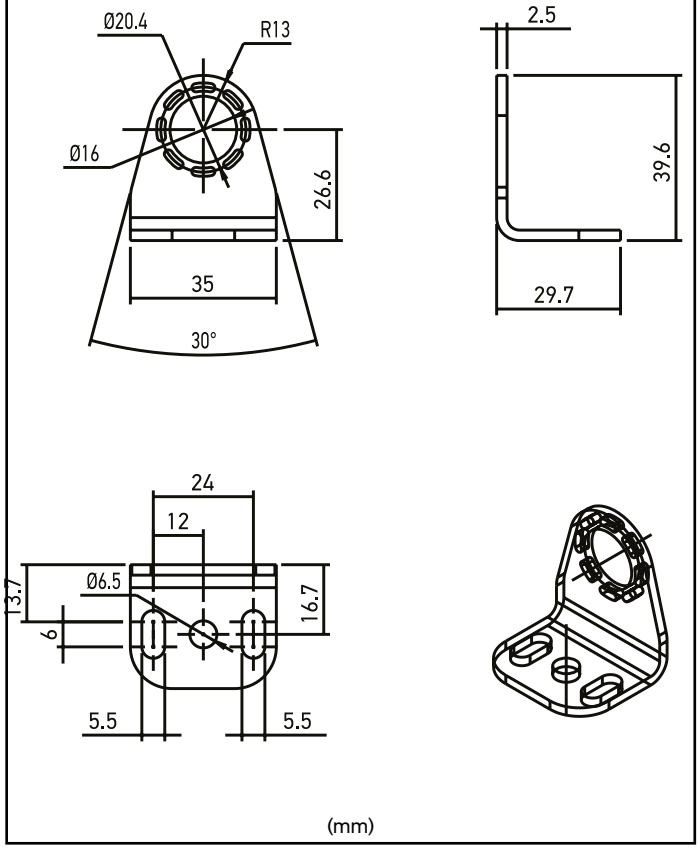
(mm)

ST-K4R0T



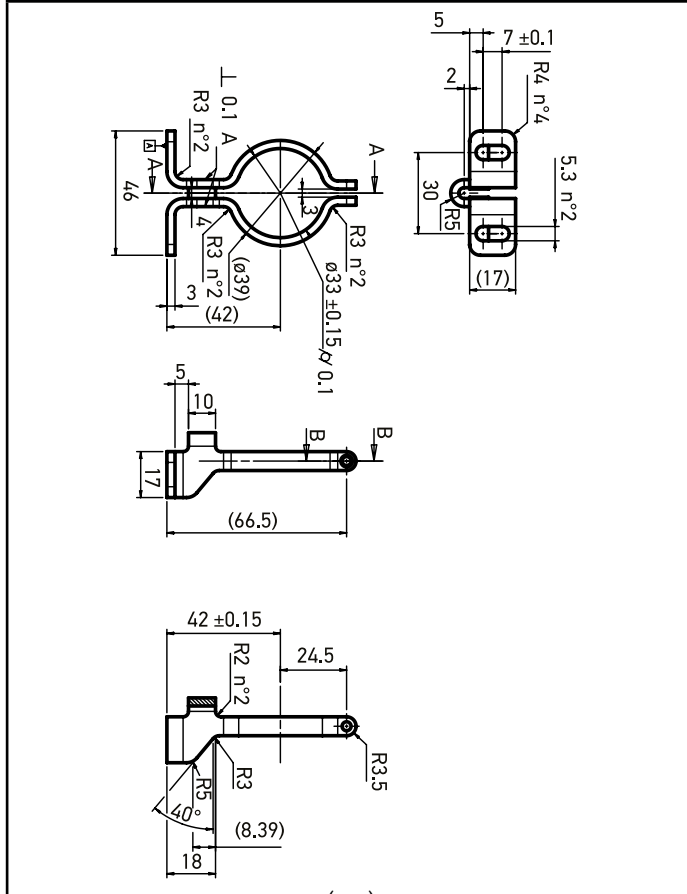
(mm)

ST-K4R0T



(mm)

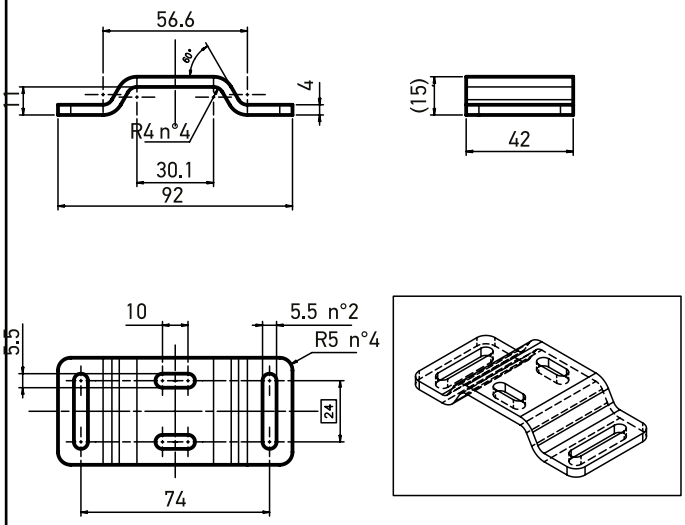
ST-K4R0T-SG



(mm)

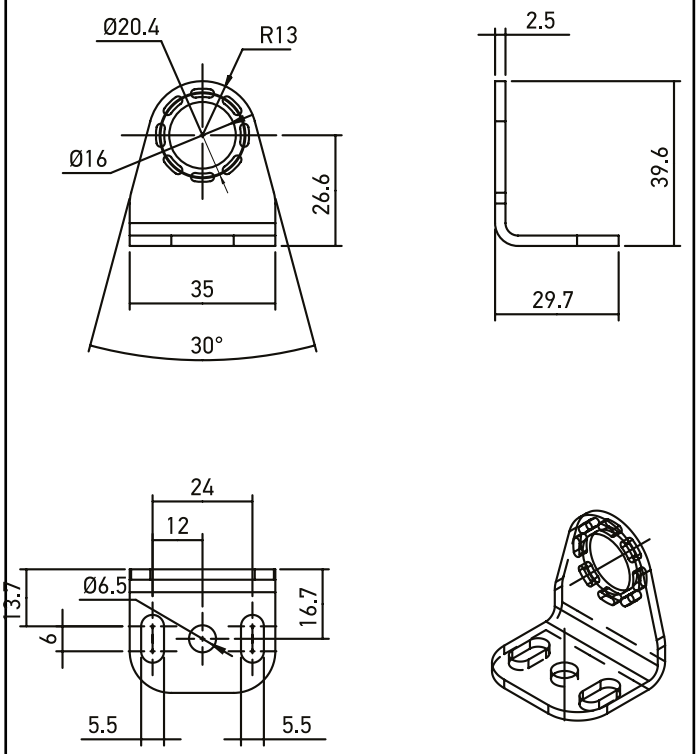
MECHANICAL DRAWINGS

ST-K4REAR-SG



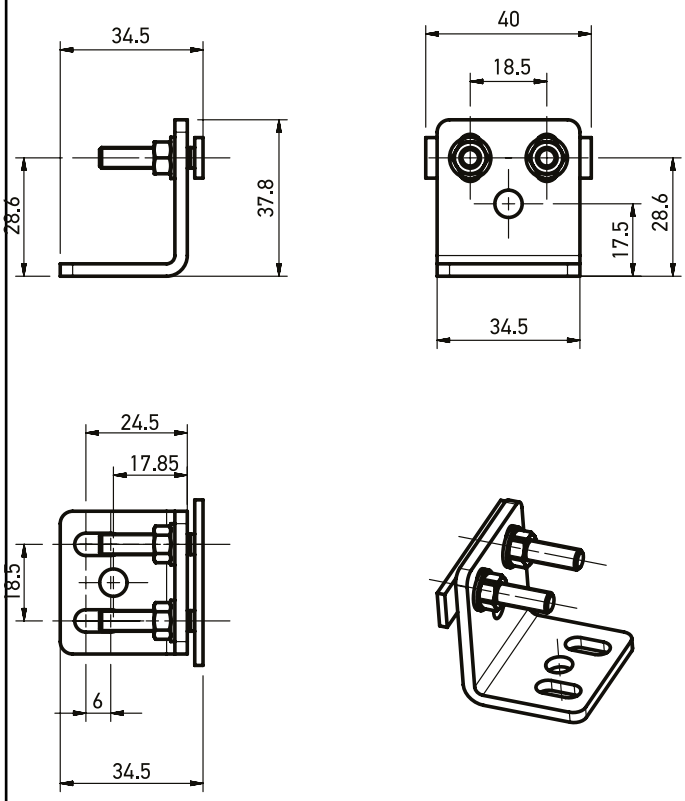
(mm)

ST-K40R



(mm)

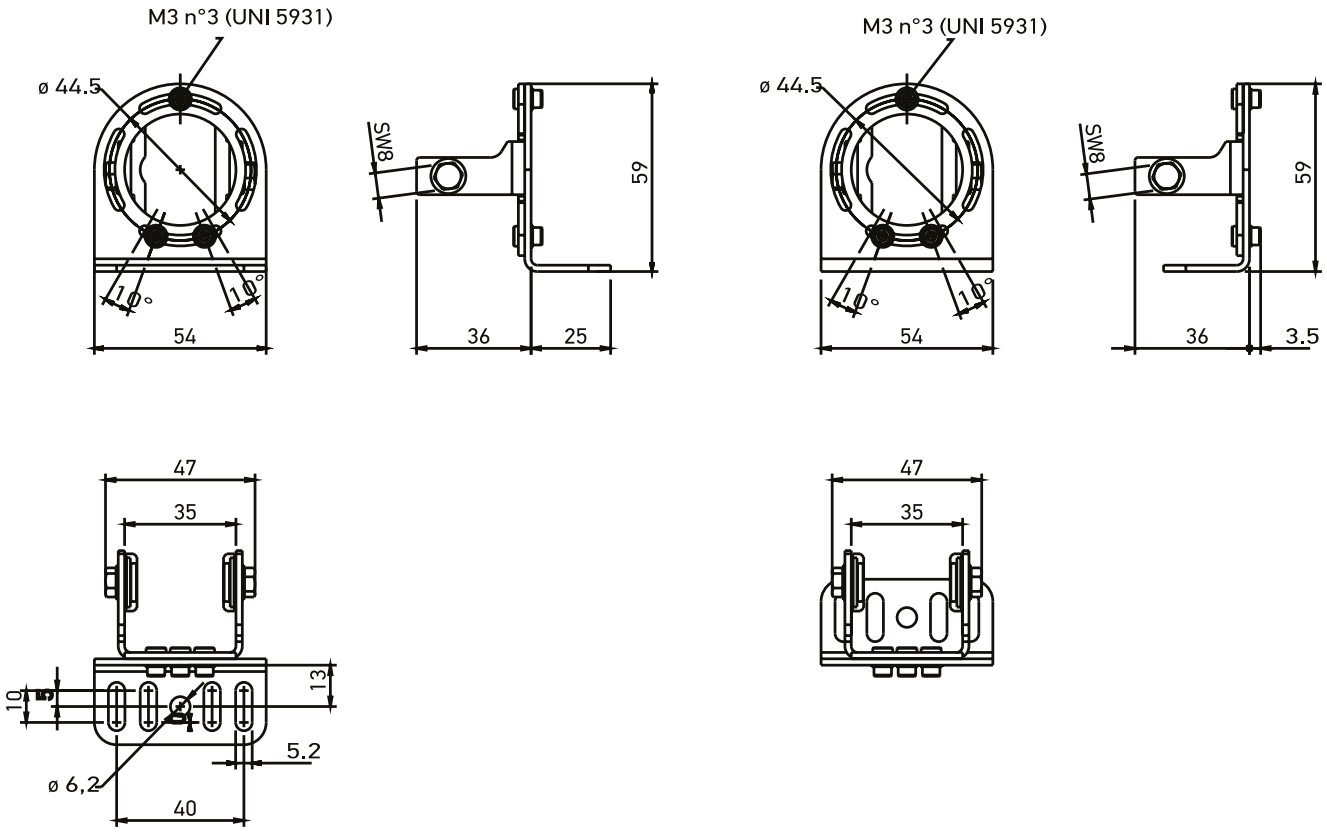
ST-KSTD



(mm)

MECHANICAL DRAWINGS

ST-K4ROT-OP



(mm)

DATASENSING
easing automation challenges

WEBSITE

SLS-BRACKET
COMPLETE BRACKET SYSTEM



- SLS mount bracketComplete bracket system
- Pitch regulation bracket system
- Head protective bracket

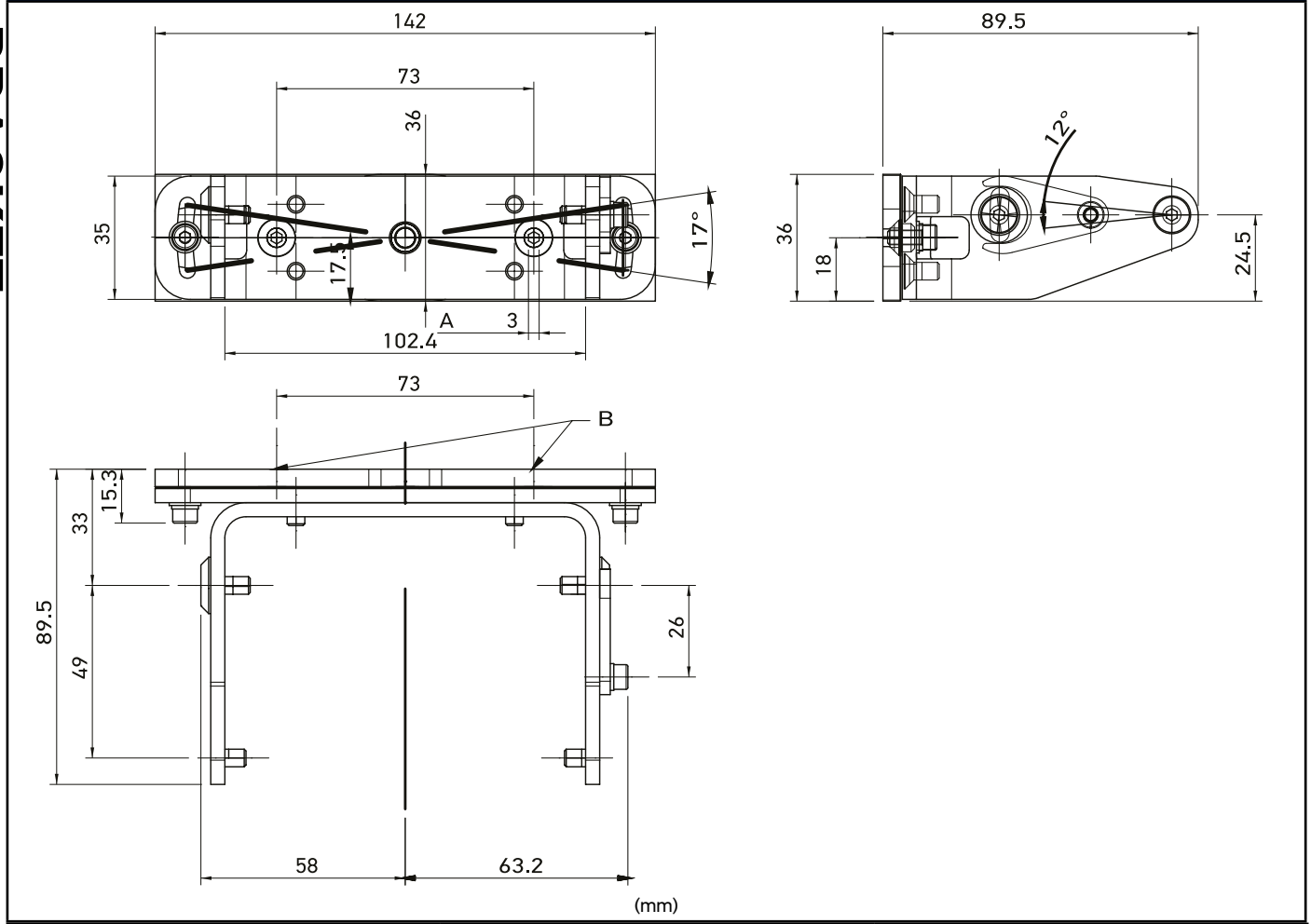
CE UK CA

AVAILABLE MODELS

Description	Model
SLS-BRACKET-A	**SLS-BRACKET-A** (95ASE2920)
SLS-BRACKET-B	**SLS-BRACKET-B** (95ASE2930)
SLS-BRACKET-C	**SLS-BRACKET-C** (95ASE2940)

MECHANICAL DRAWINGS

SLS-BRACKET-A

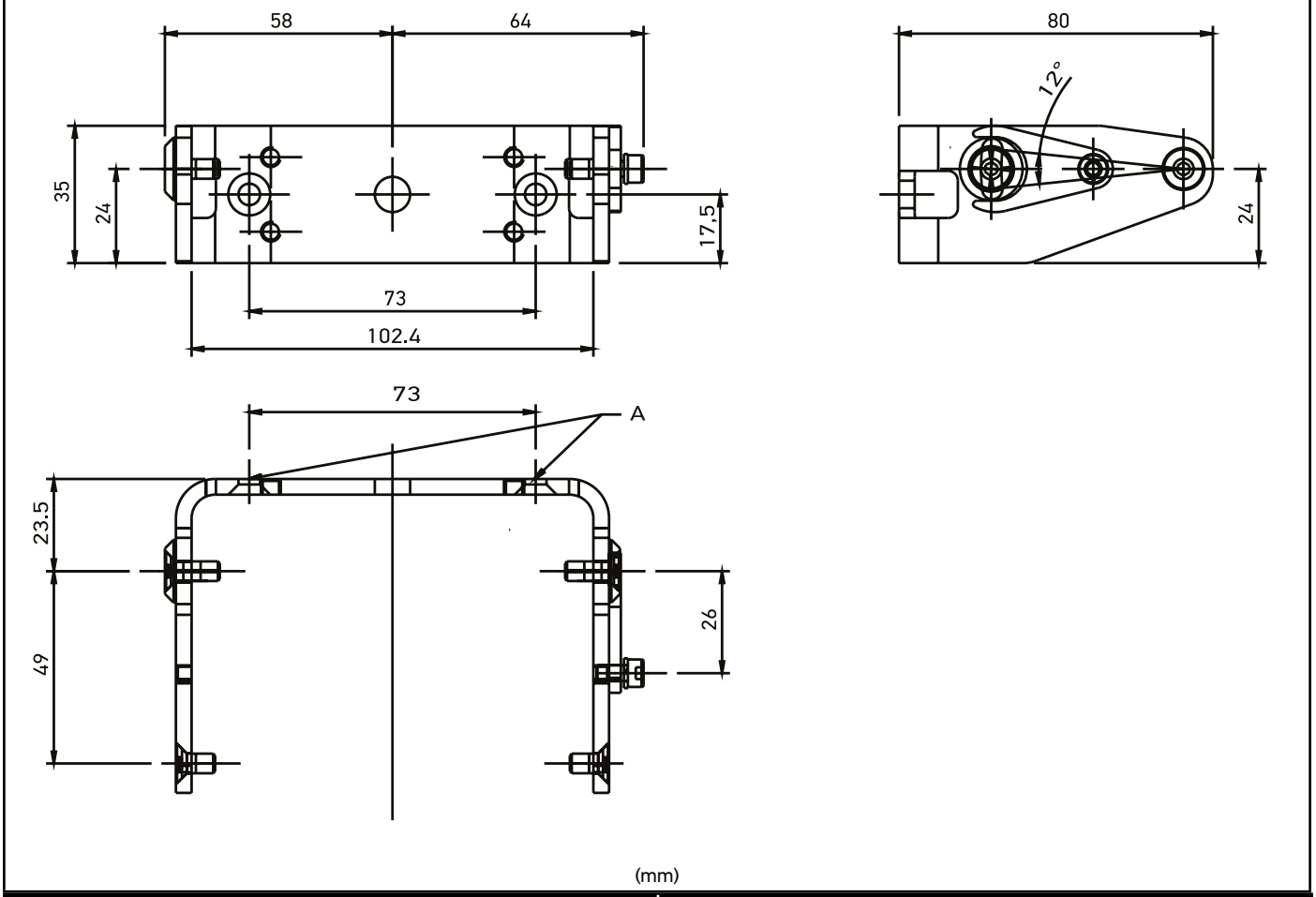


(mm)

Model	A	B
SLS-BRACKET-A	Ex.Key	n°2 M5 holes for fixing

MECHANICAL DRAWINGS

SLS-BRACKET-B

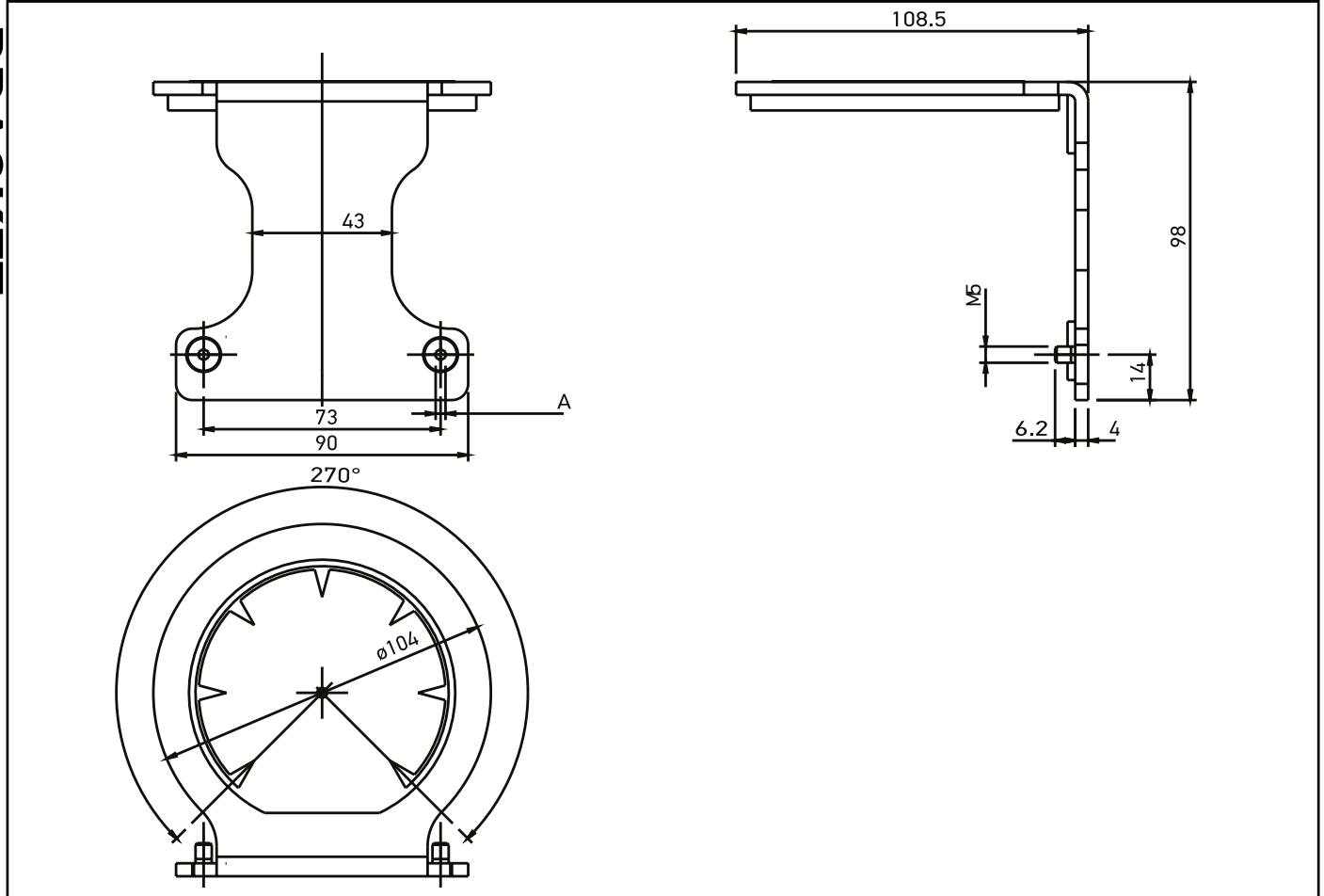


(mm)

Model	A
SLS-BRACKET-B	n°2 M5 holes for fixing

MECHANICAL DRAWINGS

SLS-BRACKET-C



(mm)

Model	A
SLS-BRACKET-C	Ex.Key 3

DATASENSING
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WEBSITE

CS-ME

FORCIBLY GUIDED RELAY INTERFACE



CS-ME is an interface with two forcibly guided relays, providing 3 NO contacts. The diagnostic function must be performed by the Safety Light Curtains through External Device Monitoring function.

AVAILABLE MODELS

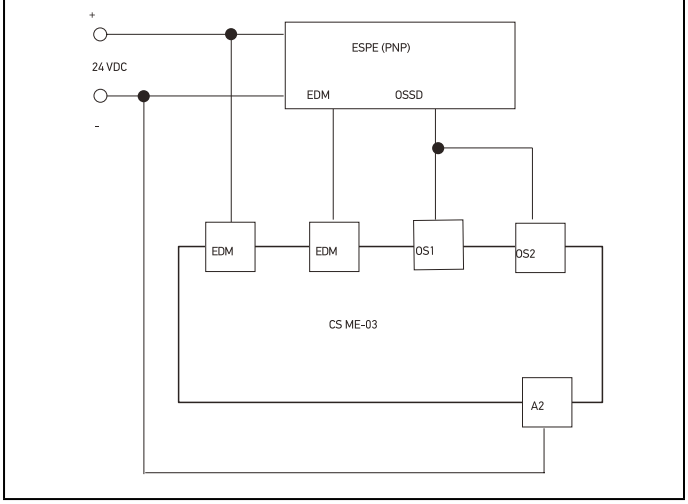
Description	Model
Forced guided relay interface 3NO + 1 NC	**CSME-03VU24-Y14** (95ASE1270)

TECHNICAL SPECIFICATIONS

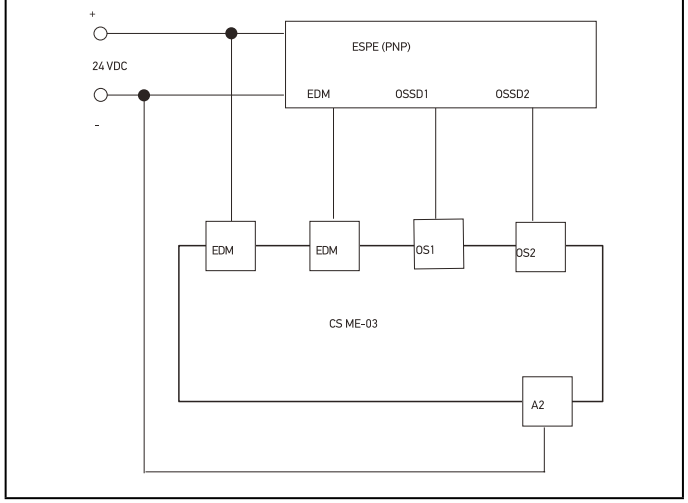
	CSME-03VU24-Y14
GENERAL DATA	
Response time	20 ms
MECHANICAL DATA	
Dimensions	91 x 99 x 22.5
Material	Plastic
ENVIRONMENTAL DATA	
Humidity	15 ... 95 % no condensation
Operating Temperature	-25 ... 55 °C
SAFETY PARAMETERS	
Pl	up to e depending on ESPE
SIL	up to 3
INPUT/OUTPUT	
Output function	3 x NO + 1 x NC
FUNCTIONS	
EDM (External Device Monitoring)	Must be activated on Safety Light Curtain (ESPE)
Reset (restart cycle)	Automatic

WIRING DIAGRAM

CSME-03VU24-Y14 ESPE 1 channel

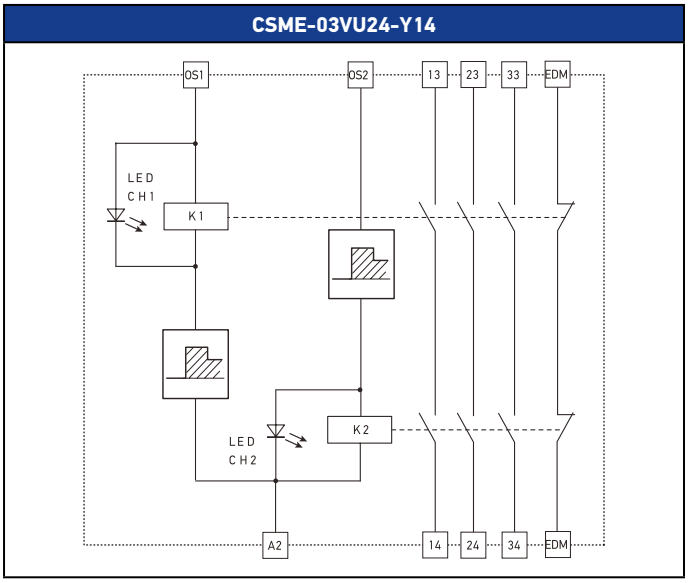


CSME-03VU24-Y14 ESPE 2 channels



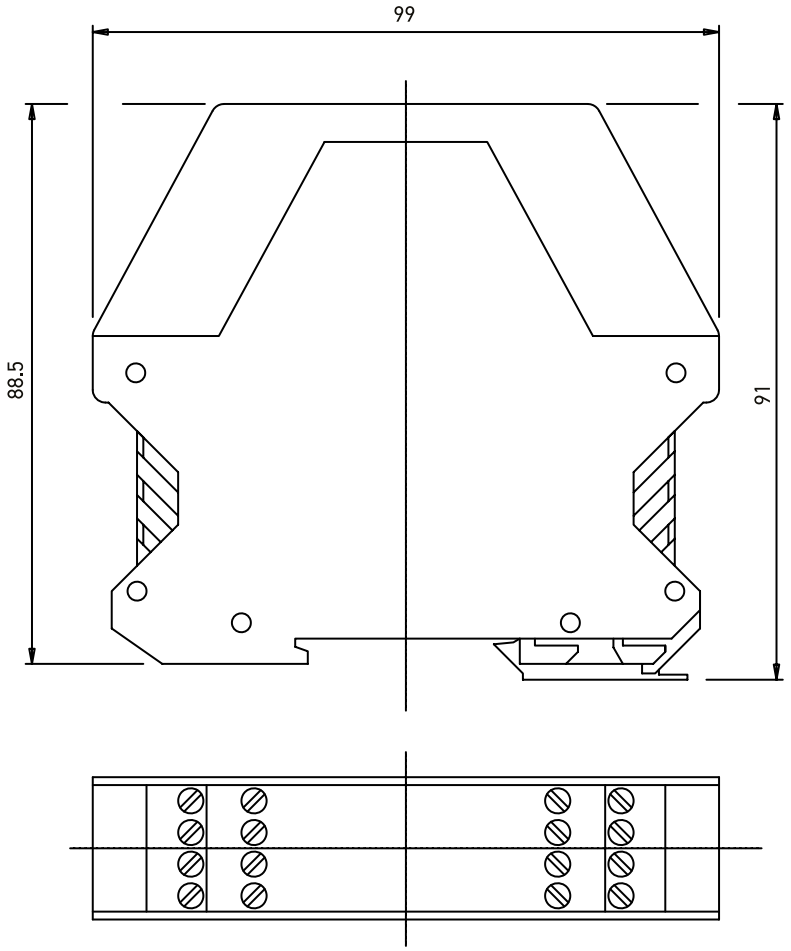
INTERNAL DIAGRAM

CSME-03VU24-Y14



MECHANICAL DRAWINGS

CSME-03VU24-Y14



(mm)

DATASENSING
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WEBSITE

SE-SR2

SAFETY UNIT WITH 3 NO AND 1 NC RELAY OUTPUTS



Safety unit SE-SR2 can be used in combination with all Safety Light Curtains. It can be configured to work in automatic or manual restart, and can monitor external devices.

- Pl e, SIL 3 Safety Unit
- 3 NO + 1 NC relays contacts
- Operating temperature: -10 ... +55°C
- Auto/Manual restart, EDM

AVAILABLE MODELS

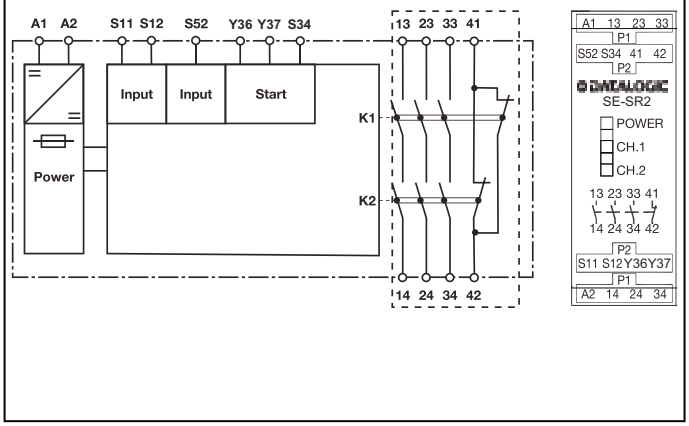
Description	Model
Safety unit 3NO + 1NC outputs	**SE-SR2** (95ACC6170)

TECHNICAL SPECIFICATIONS

	SE-SR2
GENERAL DATA	
Response time	10 ms
MECHANICAL DATA	
Dimensions	23 x 94 x 121
Material	Plastic
SAFETY PARAMETERS	
Pl	e
SIL	3
INPUT/OUTPUT	
Output function	3 x NO + 1 x NC
FUNCTIONS	
EDM (External Device Monitoring)	Available
Reset (restart cycle)	Automatic/Manual/Monitored

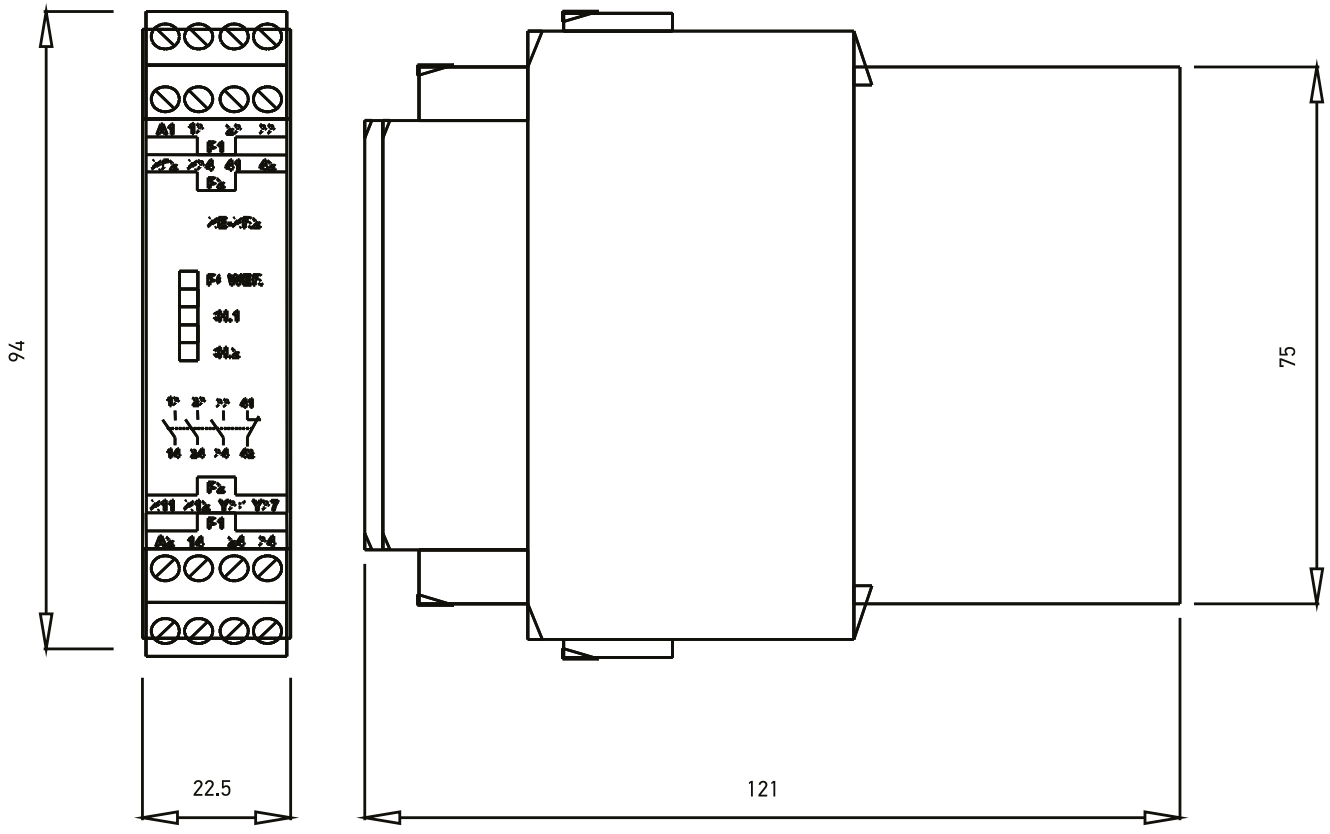
INTERNAL DIAGRAM

SE-SR2



MECHANICAL DRAWINGS

SE-SR2



(mm)

WEBSITE

Laser Pointers

LASER POINTERS FOR SAFETY LIGHT CURTAINS ALIGNMENT



Class 2 red laser pointer to be used to help the mechanical alignment of TX and RX unit of safety light curtain

- SH-LP: with fast plastic clamping bracket, compatible with SH4, SG2, SG4, SG4 EXTENDED, SG COMPACT BODY
- SG-LP: with regulable metal bracket compatible with SG2, SG4, SG4 EXTENDED, SG COMPACT BODY, SG BODY BIG, SG REFLECTOR

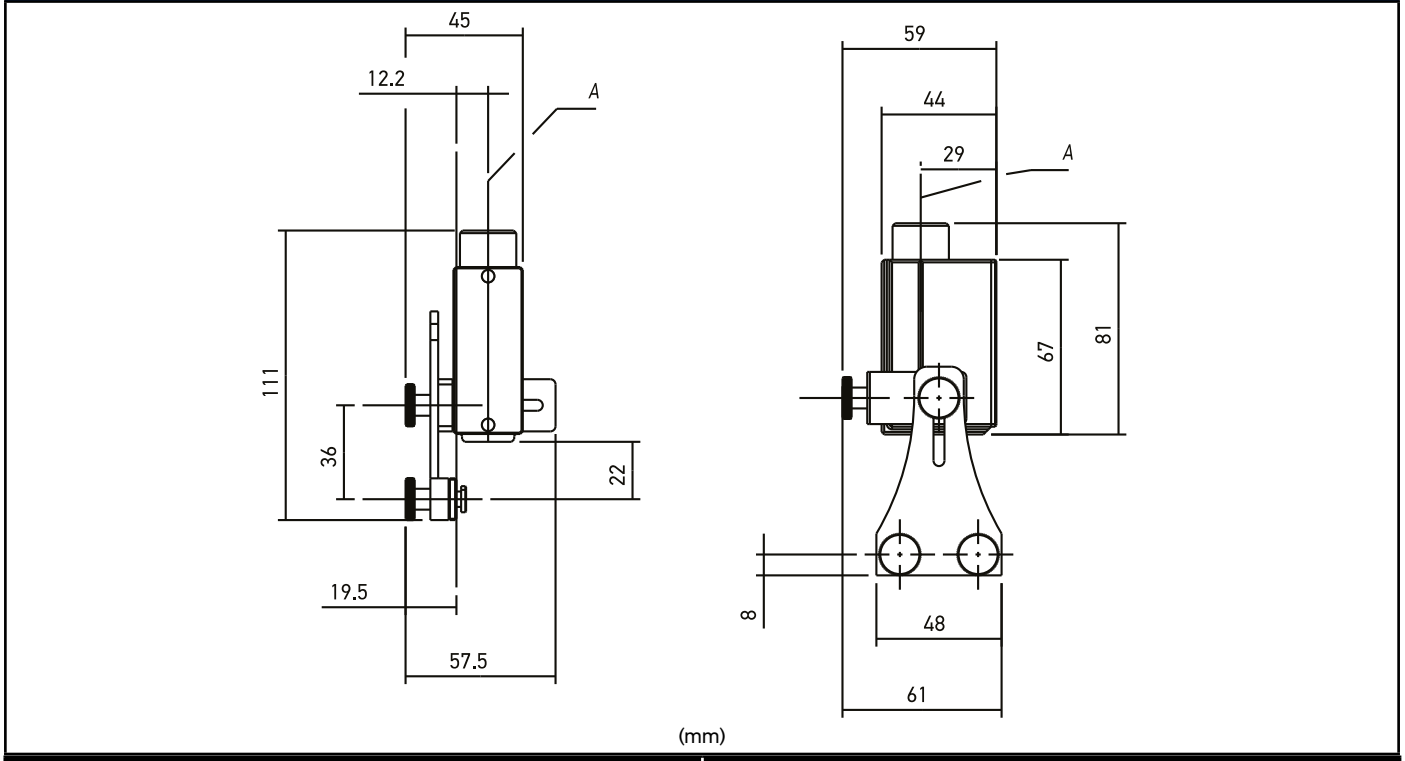
CE UKCA

AVAILABLE MODELS

Description	Model
Laser pointer for SG light curtains	**SG-LP** (95ASE5590)
Laser pointer for SH4 light curtains	**SH-LP** (95ASE0030)

MECHANICAL DRAWINGS

SG-LP Minimum lenght

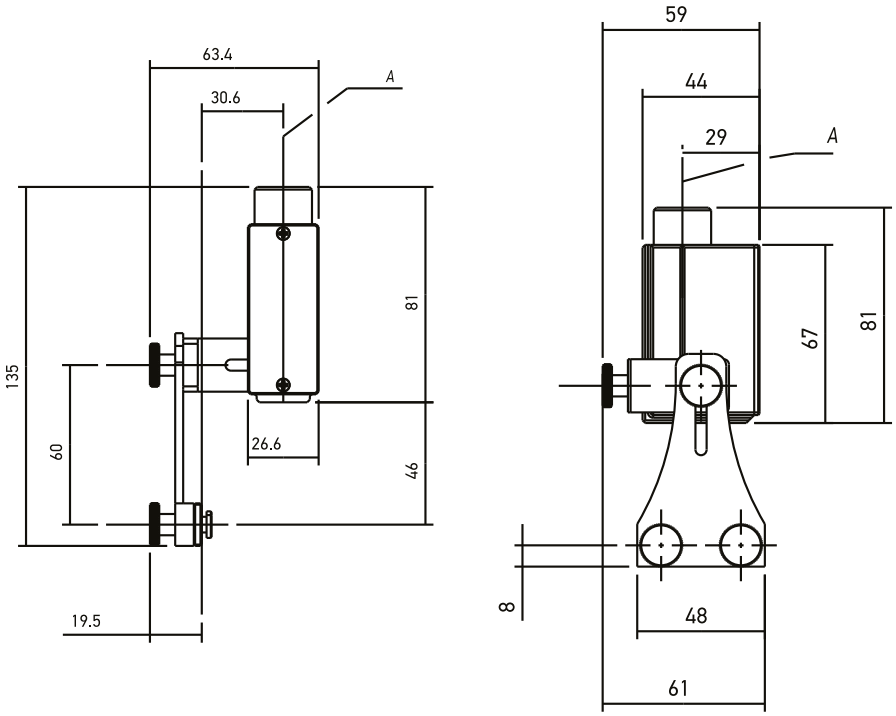


(mm)

Model	A
SG-LP	Laser emitter

MECHANICAL DRAWINGS

SG-LP Maximum lenght

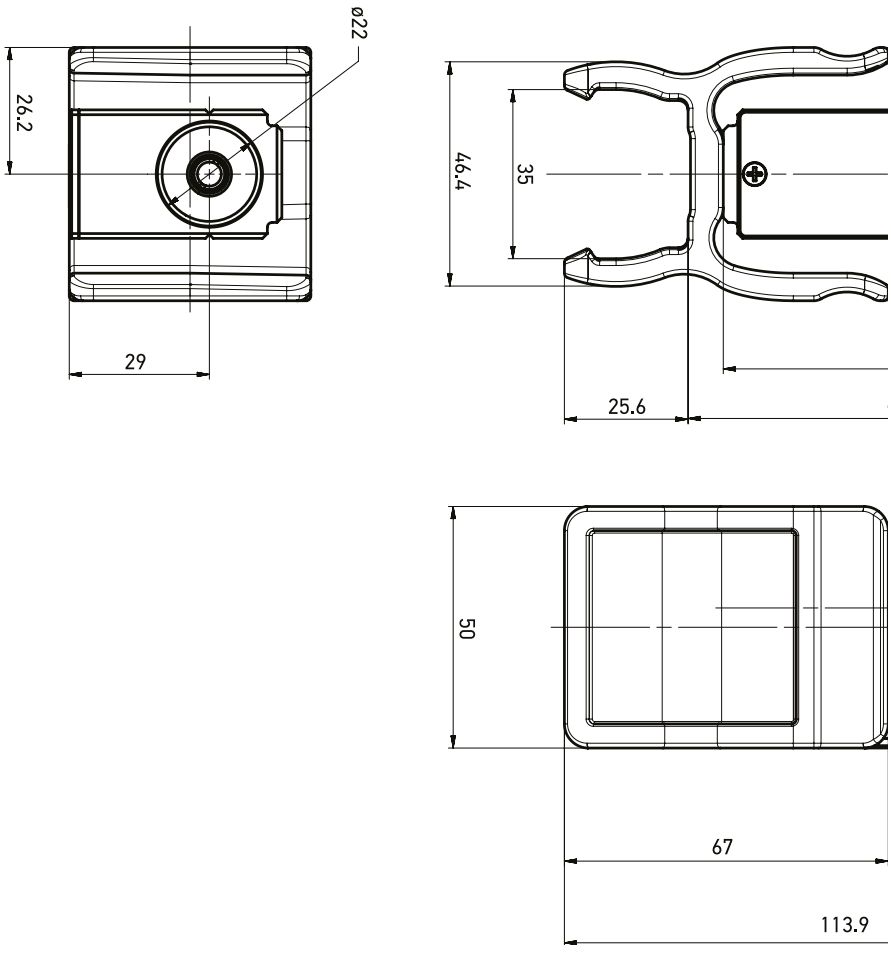


(mm)

Model	A
SG-LP	Laser emitter

MECHANICAL DRAWINGS

SH-LP



(mm)

WEBSITE

TP

TEST PIECES FOR SAFETY LIGHT CURTAINS



• Black metal cylindrical test rod to test the detection capability of safety light curtainsDiameters: 14, 20, 24, 30, 34, 35, 40 mm

CE UKCA

AVAILABLE MODELS

Description	Model
Safety light curtains test piece ø 14 mm	**TP-14** (95ACC1630)
Safety light curtains test piece ø 20 mm	**TP-20** (95ACC1640)
Safety light curtains test piece ø 24 mm	**TP-24** (95ASE2570)
Safety light curtains test piece ø 30 mm	**TP-30** (95ACC1650)
Safety light curtains test piece ø 34 mm	**TP-34** (95ASE2580)
Safety light curtains test piece ø 35 mm	**TP-35** (95ACC1660)
Safety light curtains test piece ø 40 mm	**TP-40** (95ASE1820)
Safety light curtains test piece ø 14 mm Box 30 pcs	**TP-14 (30 pcs)** (95ASE2810)
Safety light curtains test piece ø 30 mm Box 30 pcs	**TP-30 (30 pcs)** (95ASE2820)

DATASENSING
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WEBSITE

SG-SRT

MUTING CONNECTION BOX FOR EXTERNAL MUTING SENSORS



Interfaces for muting sensors and safety light curtains with redundant forcibly guided relays, restart and override commands and muting indication. SG-SRT1 and SG-SRT2 are interfaces provided with redundant forcibly guided relays, supplying a ready operator interface to restart or override the Safety Light Curtain, and have muting indication.

AVAILABLE MODELS

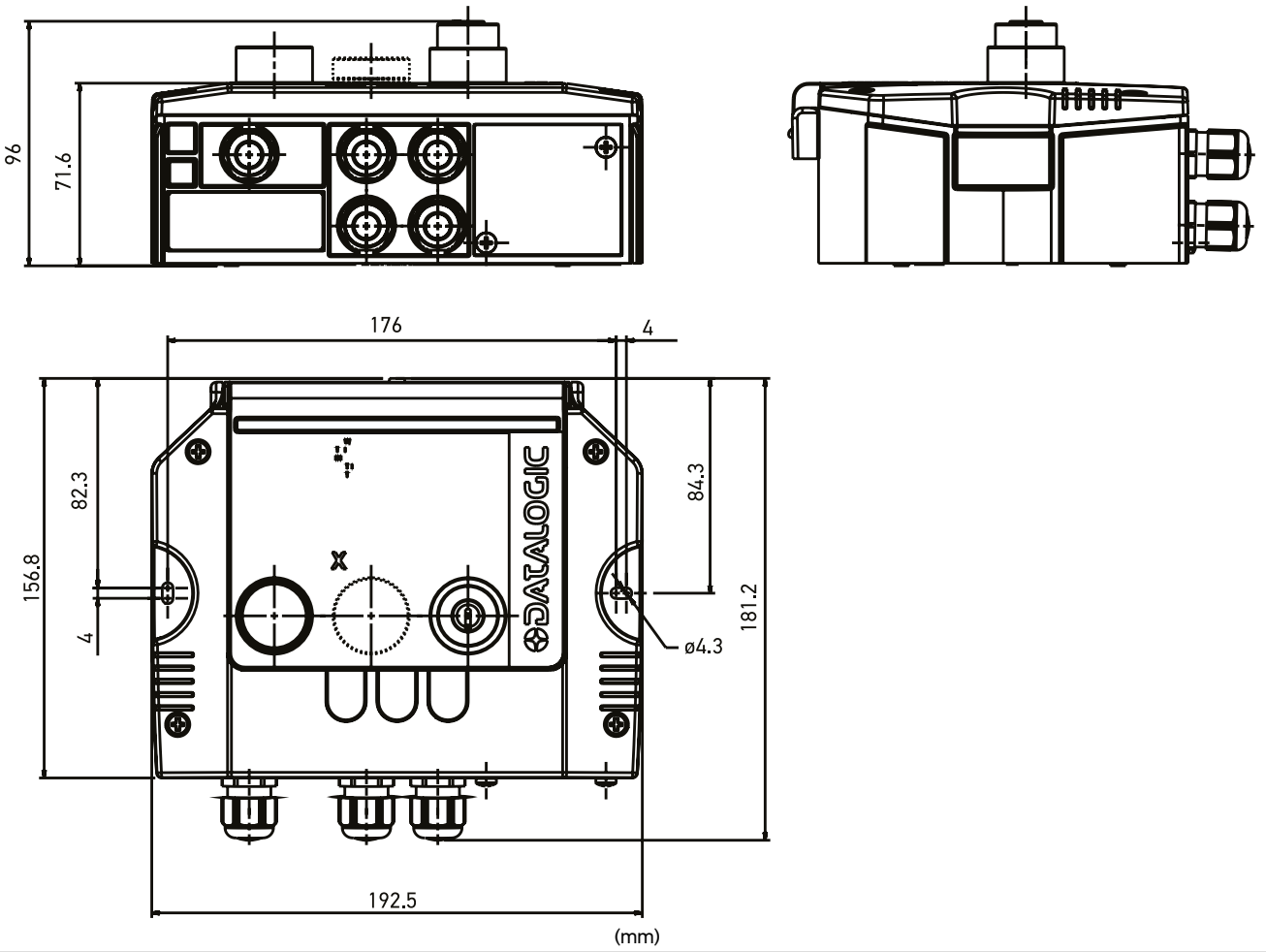
Description	Model
Muting connection box with forcibly guided relays 2NO start pushbutton override key selector	**SG-SRT-1** (95ASE2050)
Muting connection box with forcibly guided relays 2NO start pushbutton override key selector muting lamp	**SG-SRT-2** (95ASE2060)

TECHNICAL SPECIFICATIONS

	SG-SRT-1	SG-SRT-2
FUNCTIONS		
Functions	Reset mode (Automatic/Manual)/Test/Restart/Muting/ Override control unit	Reset mode (Automatic/Manual)/Test/Restart/Muting/ Override control unit/Muting state indication
INPUT/OUTPUT		
Maximum switching frequency	2 A	
Output type	Relay	
Output function	2 x NO	
ELECTRICAL DATA		
Supply voltage	24 Vdc	
MECHANICAL DATA		
Dimensions	157 x 192 x 96 mm	
Material	Plastic	

MECHANICAL DRAWINGS

SG-SRT-*



(mm)

DATASENSING
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WEBSITE

SG/SH Integrated muting arms

MUTING ARMS FOR SG AND SH SAFETY LIGHT CURTAINS



Muting arms with preinstalled and prewired muting sensors, to be used in combination with SG and SH4 safety light curtains with integrated muting function

- Active/Passive models up to 3 m
- Emitter/Receiver models up to 7 m
- 4 parallel beams for bidirectional muting
- 2 parallel beams for monodirectional muting

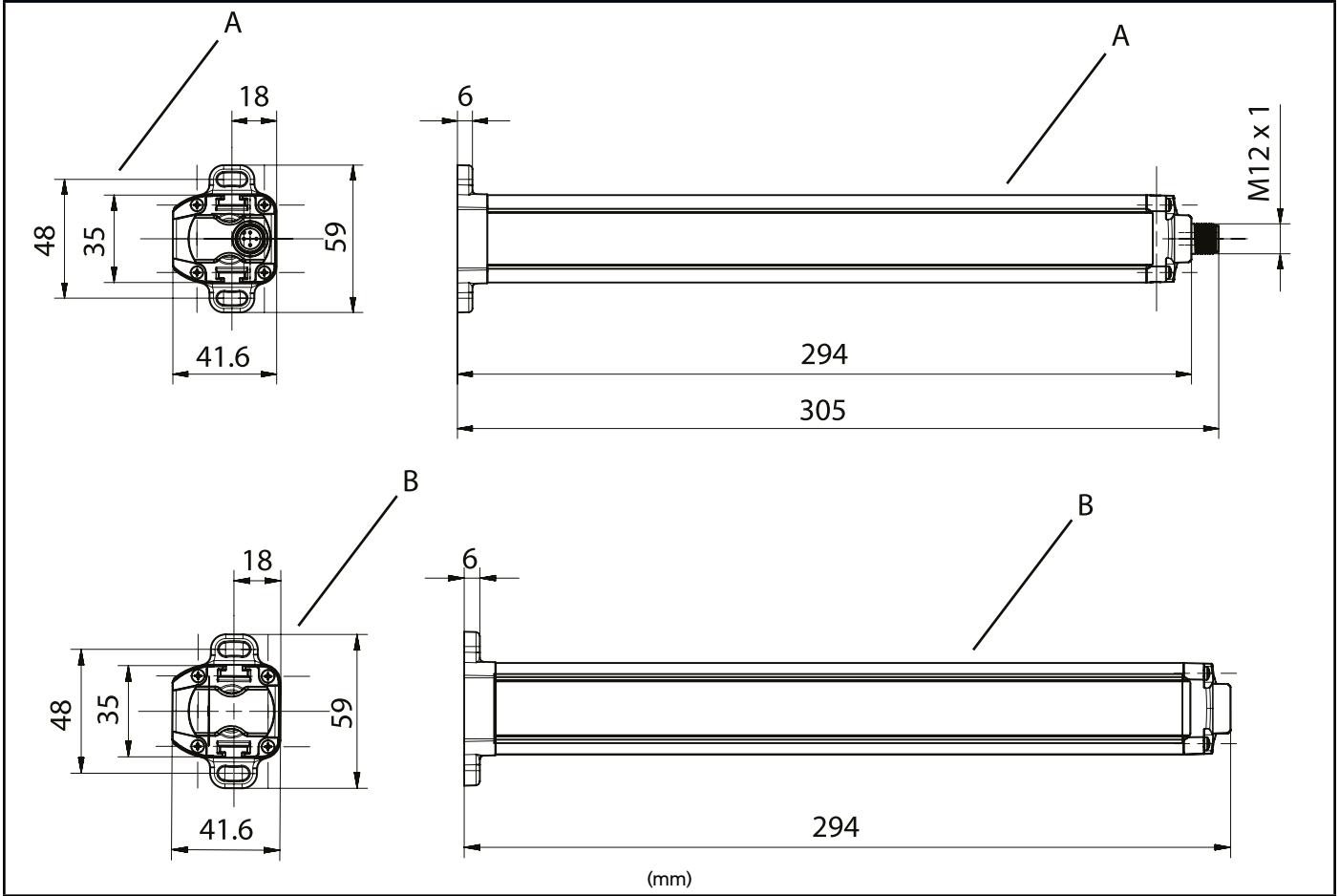
CE UKCA

AVAILABLE MODELS

Description	Model
Integrated muting arm active side	**SG-AS-ARM** (95ASE1841)
Integrated muting arm passive retroreflective side	**SG-PR-ARM** (95ASE1851)
Integrated retroreflective muting arms for monodirectional L muting for SG	**SG-L-ARMS** (95ASE1861)
Integrated retroreflective muting arms for bidirectional T muting for SG	**SG-T-ARMS** (95ASE1871)
Integrated Emitter/Receiver muting arms - left couple	**SG-F1-G1-ARMS** (95ASE1880)
Integrated Emitter/Receiver muting arms - right couple	**SG-F2-G2-ARMS** (95ASE1890)
Integrated muting arms mounting kit for SG BODY BIG	**SG-CB-B** (95ASE1920)
Integrated muting arms mounting kit for SG/SH4	**SG-CB-C** (95ASE1930)
Integrated retroreflective muting arms for bidirectional T muting for SH4	**SH-T-ARMS** (95ASE0035)
Integrated retroreflective muting arms for monodirectional L muting for SH4	**SH-L-ARMS** (95ASE0036)

MECHANICAL DRAWINGS

SG-AS-ARM

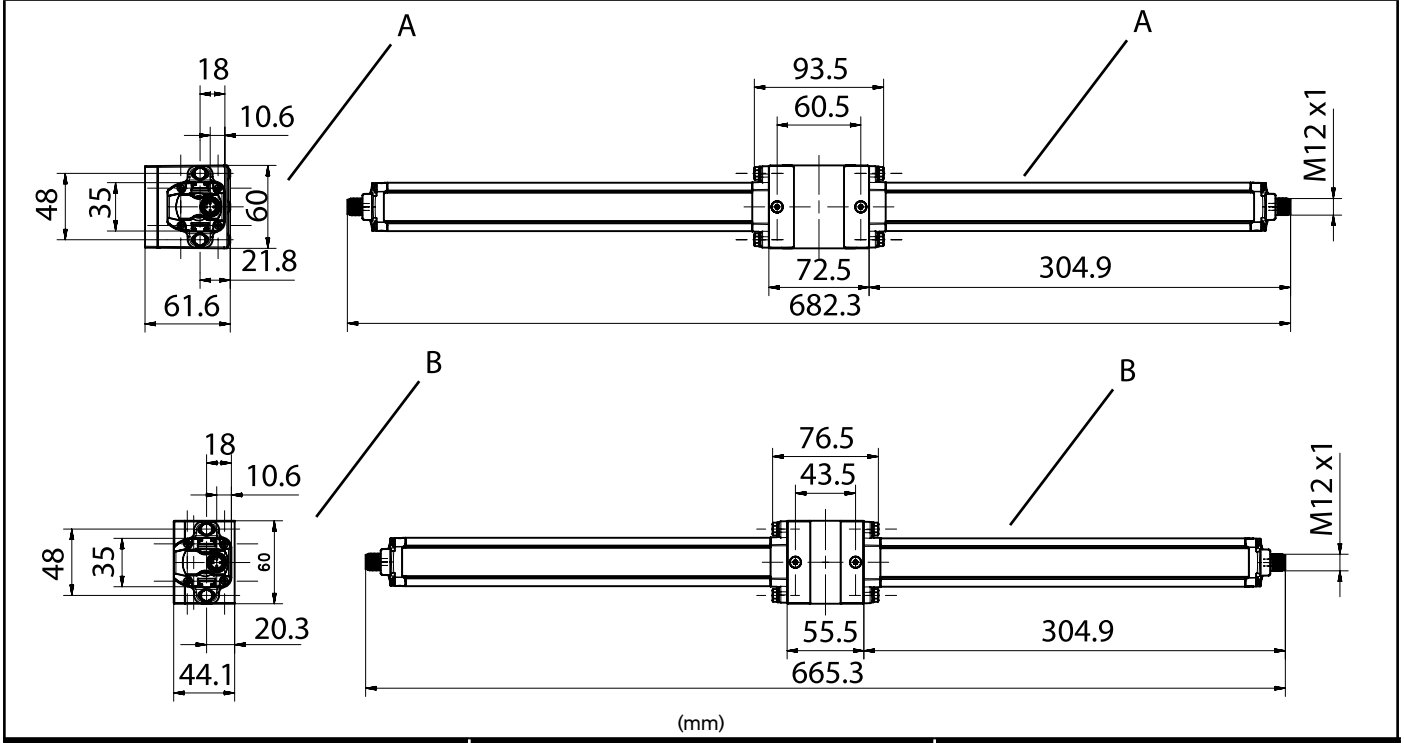


(mm)

Model	A	B
SG-AS-ARM	Active	Passive

MECHANICAL DRAWINGS

SG-PR-ARM

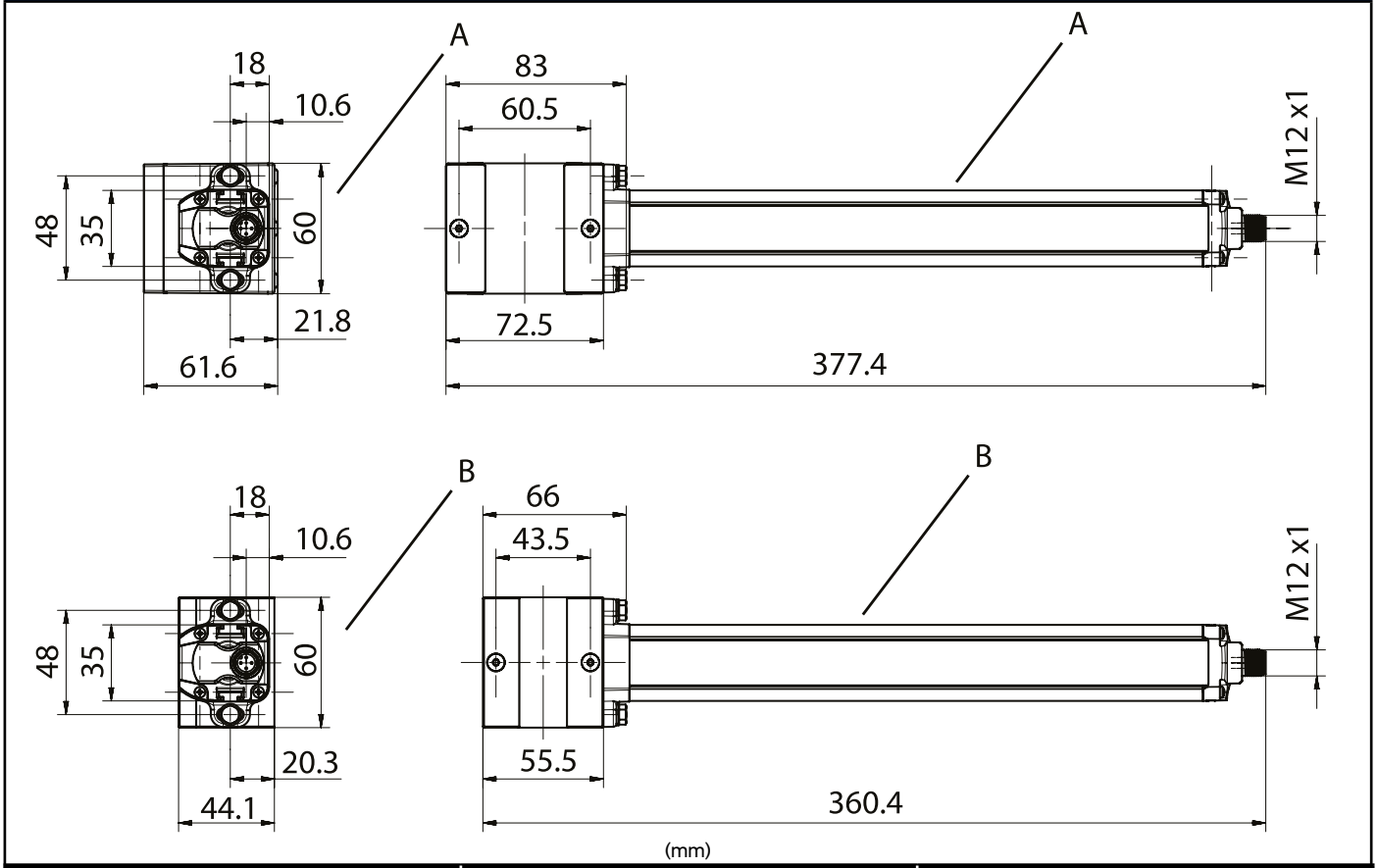


(mm)

Model	A	B
SG-PR-ARM	Active	Passive

MECHANICAL DRAWINGS

SG-L-ARM



(mm)

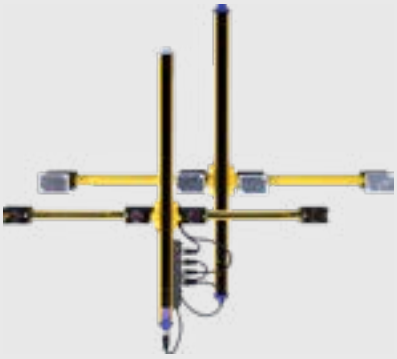
Model	A	B
SG-L-ARM	Active	Passive

DATASENSING
easing automation challenges

WEBSITE

SG-M

FLEXIBLE MUTING ARMS KITS FOR SAFETY LIGHT CURTAINS



Modular, ready-to-use muting sensor kit for flexible installation.

- Pre-assembled arms with sensors mounted on adjustable brackets
- Kits for T muting (4 beams) or L and X muting (2 beams)
- Retroreflective sensors S100 or S8 with intensity regulation
- Cables protected inside the metallic arms
- Fast connection to the light curtain through SG-M-CB connection box

CODE DESCRIPTION

SG-M L - S8 - 200 - L

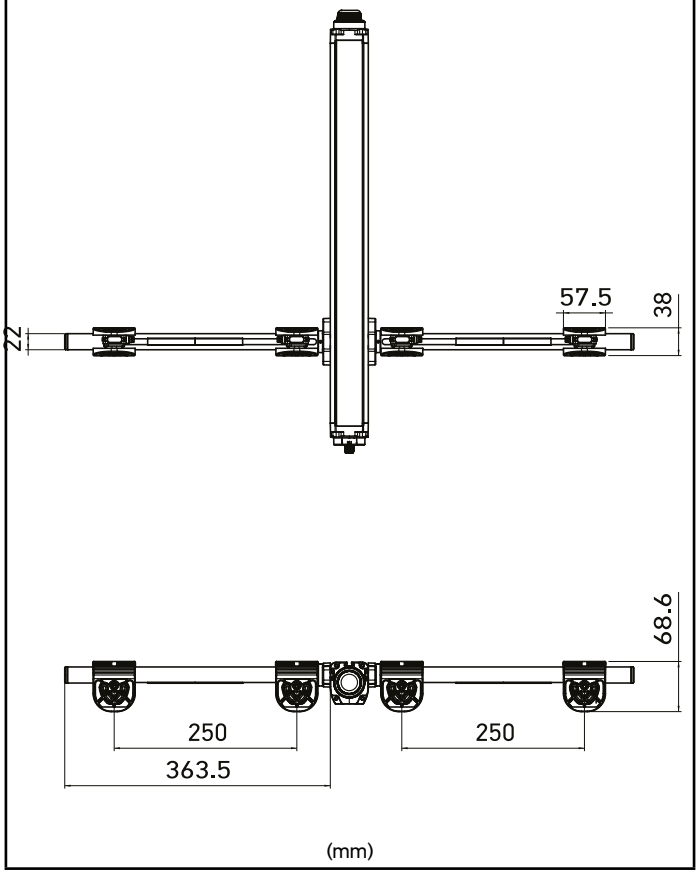
series	**SG-M**	Sensor muting sensors arms
muting configu-ration	**L**	2 sensors, 2 reflectors. Parallel beams. Monodirectional (Exit only)
	T	4 sensors, 4 reflectors. Parallel beams. Bidirectional
	M	2 sensors, 2 reflectors. Crossed beams. Bidirectional
muting sensor	**S8**	2 x S8-PR-5-B01-PP
	S100	2 x S100-PR-5-B10-PK
cable lenght	**200**	2000 mm
arm orientation	**L**	Left: the muting arm is to the left, looking at light curtain receiver
	R	Right: muting arm is to the right, look- ing at light curtain receiver

AVAILABLE MODELS

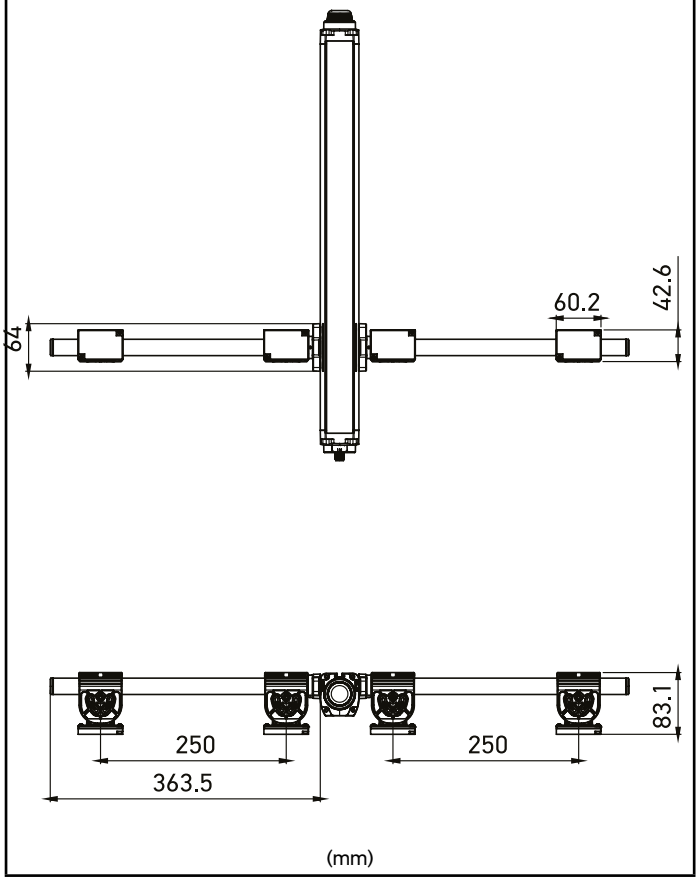
Description	Model
SG-M Kit for L muting right side with adjustable retroreflective sensors 2 sensors S8-PR-5-B01-PP cables=2000mm with M12 connectors	**SG-ML-S8-200-R** (95ASE2340)
SG-M Kit for T muting with adjustable retroreflective sensors 4 sensors S8-PR-5-B01-PP cables=2000mm with M12 connectors	**SG-MT-S8-200** (95ASE2350)
SG-M Kit for X muting with adjustable retroreflective sensors 2 sensors S8-PR-5-B01-PP cables=2000mm with M12 connectors	**SG-MX-S8-200** (95ASE2360)
SG-M Kit for L muting right side with adjustable retroreflective sensors 2 sensors S8-PR-5-B01-PP cables=700mm with M12 connectors	**SG-ML-S8-R** (95ASE2370)
SG-M Kit for T muting with adjustable retroreflective sensors 4 sensors S8-PR-5-B01-PP cables=700mm with M12 connectors	**SG-MT-S8** (95ASE2380)
SG-M Kit for X muting with adjustable retroreflective sensors 2 sensors S8-PR-5-B01-PP cables=700mm with M12 connectors	**SG-MX-S8** (95ASE2390)
SG-M Kit for L muting right side with adjustable retroreflective sensors 2 sensors S100-PR-5-B10-PK cables=2000mm with M12 connectors	**SG-ML-S100-200-R** (95ASE2400)
SG-M Kit for T muting with adjustable retroreflective sensors 4 sensors S100-PR-5-B10-PK cables=2000mm with M12 connectors	**SG-MT-S100-200** (95ASE2410)
SG-M Kit for X muting with adjustable retroreflective sensors 2 sensors S100-PR-5-B10-PK cables=2000mm with M12 connectors	**SG-MX-S100-200** (95ASE2420)
SG-M Kit for L muting right side with adjustable retroreflective sensors 2 sensors S100-PR-5-B10-PK cables=700mm with M12 connectors	**SG-ML-S100-R** (95ASE2430)
SG-M Kit for T muting with adjustable retroreflective sensors 4 sensors S100-PR-5-B10-PK cables=700mm with M12 connectors	**SG-MT-S100** (95ASE2440)
SG-M Kit for X muting with adjustable retroreflective sensors 2 sensors S100-PR-5-B10-PK cables=700mm with M12 connectors	**SG-MX-S100** (95ASE2450)
Single arm for SG-M muting kits	**SG-M-ARM** (95ASE2460)
Connection Box for SG-M muting kit and SG safety light curtains	**SG-M-CB** (95ASE2500)
SG-M Kit for L muting left side with adjustable retroreflective sensors 2 sensors S8-PR-5-B01-PP cables = 2000mm with M12 connectors	**SG-ML-S8-200-L** (95ASE2590)
SG-M Kit for L muting left side with adjustable retroreflective sensors 2 sensors S8-PR-5-B01-PP cables = 700mm with M12 connectors	**SG-ML-S8-L** (95ASE2600)
SG-M Kit for L muting left side with adjustable retroreflective sensors 2 sensors S100-PR-5-B10-PK cables = 2000mm with M12 connectors	**SG-ML-S100-200-L** (95ASE2610)
SG-M Kit for L muting left side with adjustable retroreflective sensors 2 sensors S100-PR-5-B10-PK cables = 700mm with M12 connectors	**SG-ML-S100-L** (95ASE2620)
SG-M muting Kit single bracket for S8 or S100 sensors or reflector	**SG-M-BRACKET** (95ASE2630)
Mounting kit for SG-M-CB and SH-M-CB connection boxes	**SG-M-CB-KIT** (95ASE2830)
Connection Box for SG-M muting kit and SH4 safety light curtains	**SH-M-CB** (95ASE0039)
M12 Male male adaptor 5 poles	**SH-MMA** (95ASE0044)

MECHANICAL DRAWINGS

SG-M-T Active side

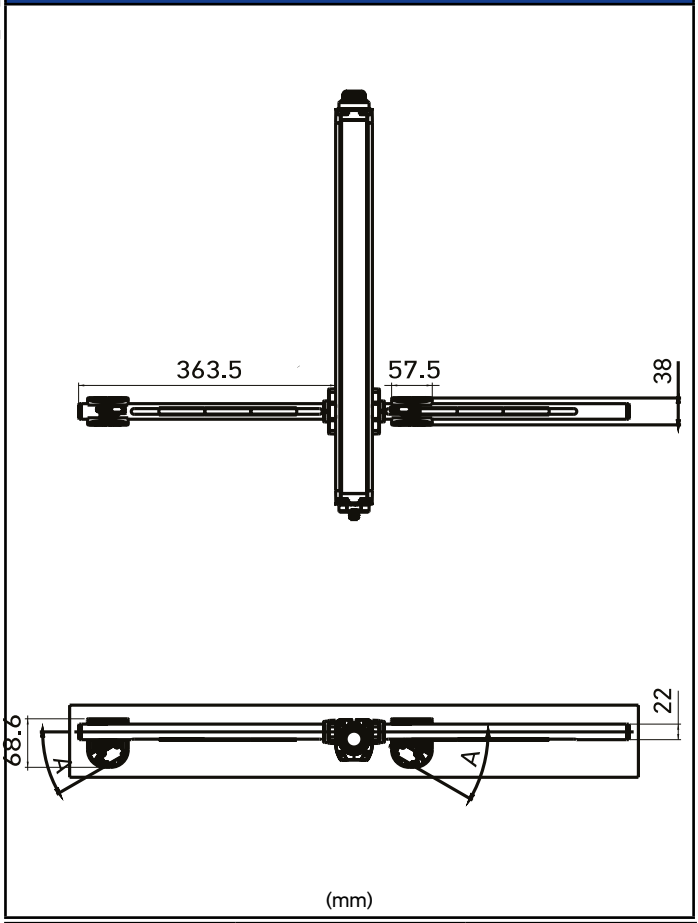


SG-M-T Passive side



MECHANICAL DRAWINGS

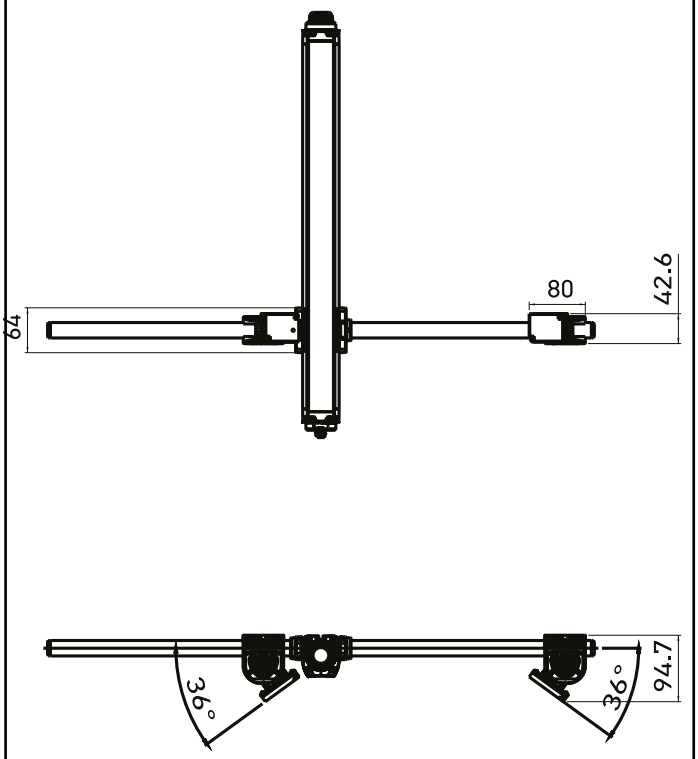
SG-M-X Active side



(mm)

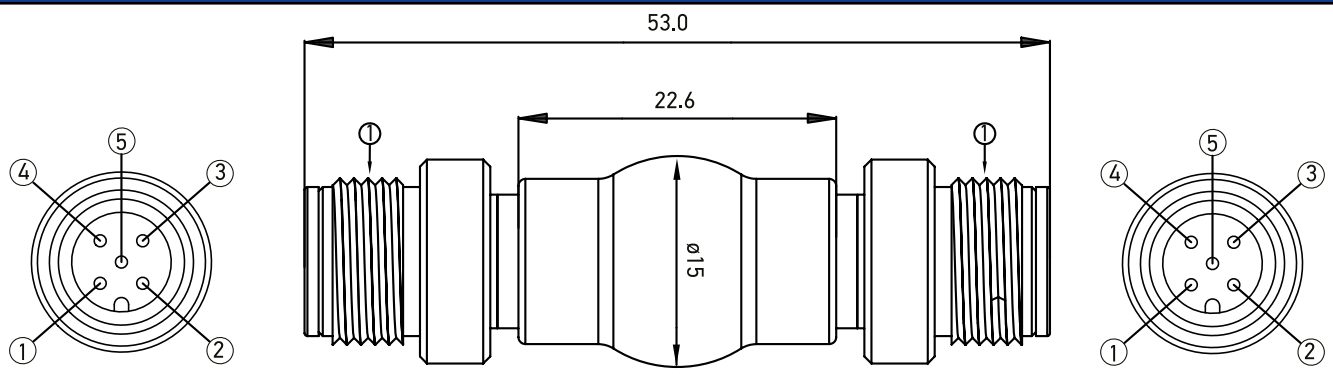
Angle / sensor type	S100	S8
A	38°	31°

SG-M-X Passive side



(mm)

SH-MMA



(mm)

SH-MMA can be used to convert the SH4 secondary connector (M12 female) in a M12 male, in order to reuse SG muting accessories and cables. It is not needed when using muting accessories designed

A FLEXIBLE SOLUTION FOR MUTING

SG-M

In some access guarding applications, like in palletizing/depallitizing machines, safety light curtains are muted while a load passes through their monitored area. When the load has an irregular shape, or has holes in it, muting can end before the load has completely passed the light curtain, causing the unnecessary stop of the machine. In cases like this, the ability to regulate the position and orientation the position and orientation of muting beams with increased flexibility, allows the system to adapt quickly and easily to any kind of situation. To simplify the installation of muting sensors in these kind of applications, Datalogic has developed the new SG-M muting sensors modular Kits. The SG-M includes retroreflective photocells as muting sensors, reflectors, cylindrical metallic arms, orientable plastic brackets, cables with M12 connectors, and a connection box for the quick wiring of the sensor outputs to the safety light curtain dedicated muting connector. The SG-M is the newest addition to a safety portfolio that includes integrated muting arms (SG-T-ARM and SG-L-ARM). The arms with external sensors can be attached directly to the light curtains of SG Series (fig. 1) or to their protective stands SG PSB (fig. 2). With SG-M, three standard configurations for muting beams can be easily installed: T Muting (fig.3), L Muting (fig. 4 and 5) and X Muting (fig. 6).

Sensors provided with the kit are retroreflective, dark on photocells, and come in two versions:
S100-PR-5-B10-PK, for standard applications with no specific requirements
S8-PR-5-B01-PP for applications where beam intensity regulation is required.

On the opposite side of the sensors, an ù reflector is mounted. Sensors and reflectors can be positioned along the arms and orientated both horizontally and vertically thanks to their brackets shape. Sensors have detachable cables (in T and L muting kits) or pigtails. Both cables have an M12 connector M12 connector, for a quick connection to the safety light curtains through a dedicated connection box (SG-M-CB), or to an external safety controller through normal cables. The cables are protected inside the metallic arms and have different lengths (700 and 2000 mm), for easy installation on the light curtains, or on the protective stands.

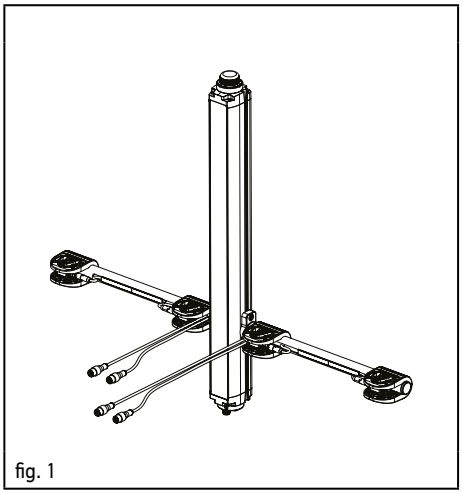


fig. 1

Muting arms attached on the light curtain

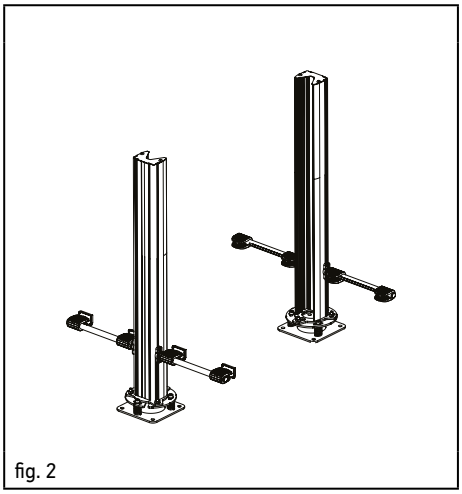


fig. 2

Muting arms attached to the protective stands

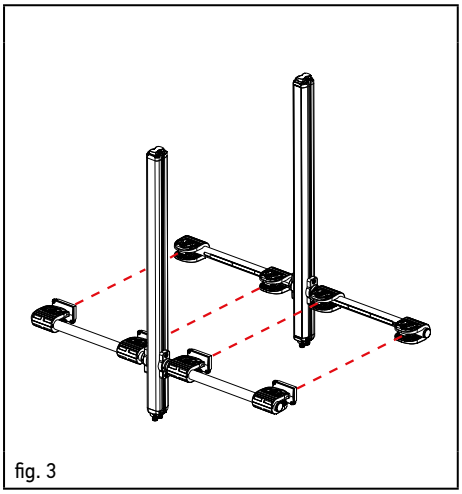


fig. 3

T muting configuration

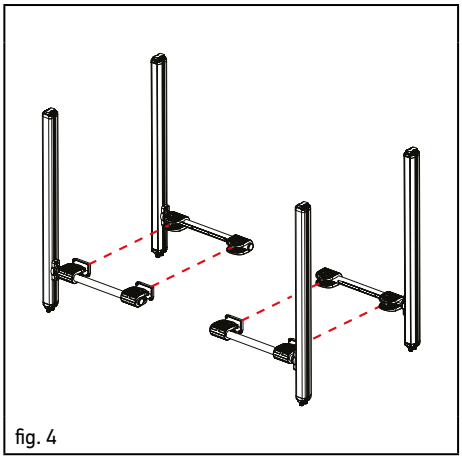


fig. 4

L muting configuration with orientation to the right.

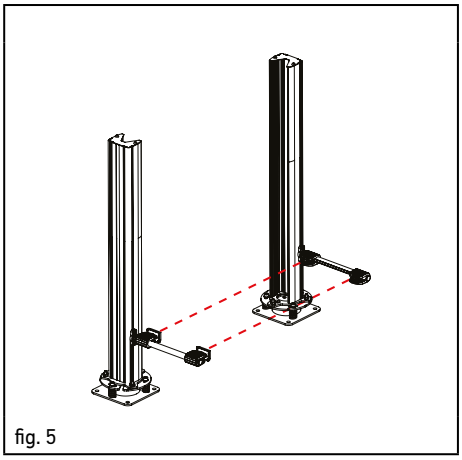


fig. 5

L muting configuration with orientation to the left

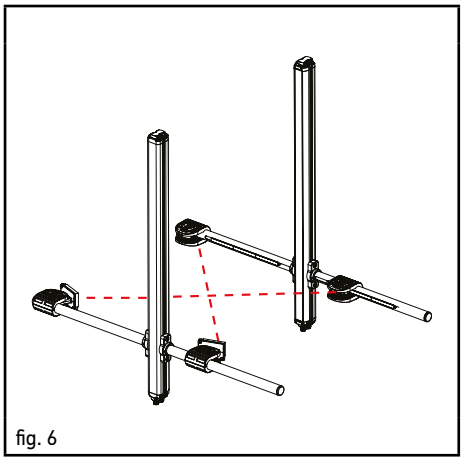


fig. 6

X muting configuration

SG-M MUTING KITS

Muting enable	Arm direction (1)	Sensitivity adjustment	Minimum working distance	Muting sensors associated (2)	Cable associated (3)	Model
L muting	Left side	Trimmer	0.2... ... 3 m	2 x S8-PR-5-B01-PP	2 x CS-M1-02-B-02 (2000 mm)	**SG-ML-S8-200-L** (95ASE2590)
		n/a		2 x S100-PR-5-B10-PK		**SG-ML-S100-200-L** (95ASE2610)
						SG-ML-S100-L (95ASE2620)
		Trimmer		2 x S8-PR-5-B01-PP	2 x CS-M1-02-B-007 (700 mm)	**SG-ML-S8-L** (95ASE2600)
	Right side					**SG-ML-S8-R** (95ASE2370)
		n/a		2 x S100-PR-5-B10-PK	2 x CS-M1-02-B-02 (2000 mm)	**SG-ML-S100-200-R** (95ASE2400)
		Trimmer		2 x S8-PR-5-B01-PP		**SG-ML-S8-200-R** (95ASE2340)
		n/a		2 x S100-PR-5-B10-PK	2 x CS-M1-02-B-007 (700 mm)	**SG-ML-S100-R** (95ASE2430)
T muting		Trimmer		4 x S8-PR-5-B01-PP	4 x CS-M1-02-B-007 (700 mm)	**SG-MT-S8** (95ASE2380)
		n/a		4 x S100-PR-5-B10-PK	4 x CS-M1-02-B-02 (2000 mm)	**SG-MT-S100-200** (95ASE2410)
					4 x CS-M1-02-B-007 (700 mm)	**SG-MT-S100** (95ASE2440)
		Trimmer		4 x S8-PR-5-B01-PP	4 x CS-M1-02-B-02 (2000 mm)	**SG-MT-S8-200** (95ASE2350)
X muting		n/a	0.45... ... 3 m	2 x S100-PR-2-B10-PK SV4973	Pig-tail 700 mm	**SG-MX-S100** (95ASE2450)
		Trimmer	0.6... ... 3 m	2 x S8-PR-5-B01-PP SV4973		**SG-MX-S8** (95ASE2390)
					Pig-tail 2000 mm	**SG-MX-S8-200** (95ASE2360)
		n/a	0.45... ... 3 m	2 x S100-PR-2-B10-PK SV4973		**SG-MX-S100-200** (95ASE2420)

The upstanding table shows the characteristics, the sensors and the cables included in any SG-M muting configuraion kit in addition to the mechanical parts (arms and brackets) necessary to connect them to the profiles of the SG family safety light curtains.

(1) “Left side” and “Right side”, related to L muting kits, refers to the position of the arm looking towards the receiver of the light curtain.
(2)Left side” and “Right side” kits differ only mechanically, in order to keep the regulating screws upside.
(2) In X Muting Kits, special versions of photocells with pigtails and M12 connectors have been used.
(3) Cables used in T and L muting kits have M8 connectors on the sensors side, and M12 connectors at the external side.
(4) Minimum distance of 0.2 m is determined by the light curtain. Maximum distance of 3 m is to avoid interferences between muting sensors

Compatibility:
SG BODY COMPACT MUTING
SG BODY BIG MUTING
SG BODY REFLECTOR MUTING
SG2 MUTING
SG4 EXTENDED
SG-PSB (only models with 2000 mm cables (SG-M*-***-200-*)

DATASENSING
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WEBSITE

LMS
MUTING LAMPS



Depending on the risk assessment, an indicator showing when the muting function of a safety light curtain is active can be necessary.

- Yellow indicator with incandescent 24 V incandescence lamp
- Accessories for horizontal or vertical mounting

CE UKCA

TECHNICAL SPECIFICATIONS

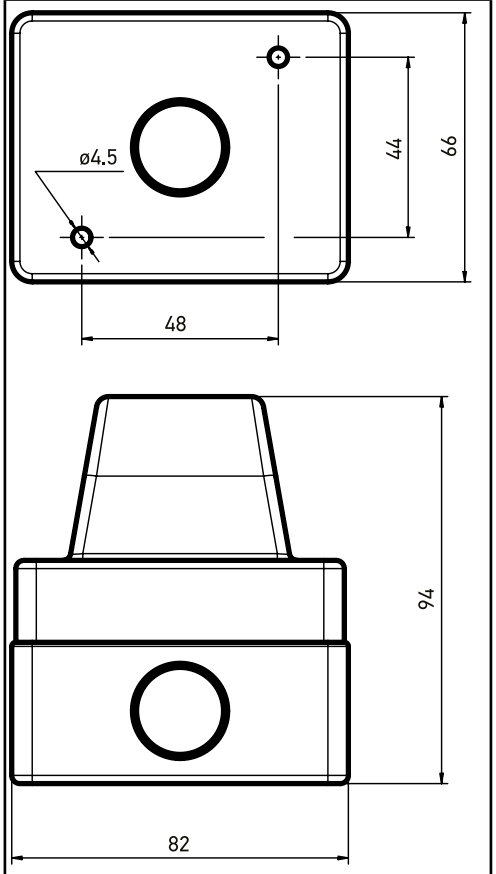
	LMS-*	SU-LMS-1*
GENERAL DATA		
Functions	Modular muting lamp, Muting lamp - horizontal mounting, Muting lamp - vertical mounting, Muting lamp	Base support for LMS-1, Tower module for LMS-1
ELECTRICAL DATA		
Supply voltage	24 Vdc	
MECHANICAL DATA		
Dimensions	Ø70x100 mm	Ø70x30 mm
Material	Plastic	

AVAILABLE MODELS

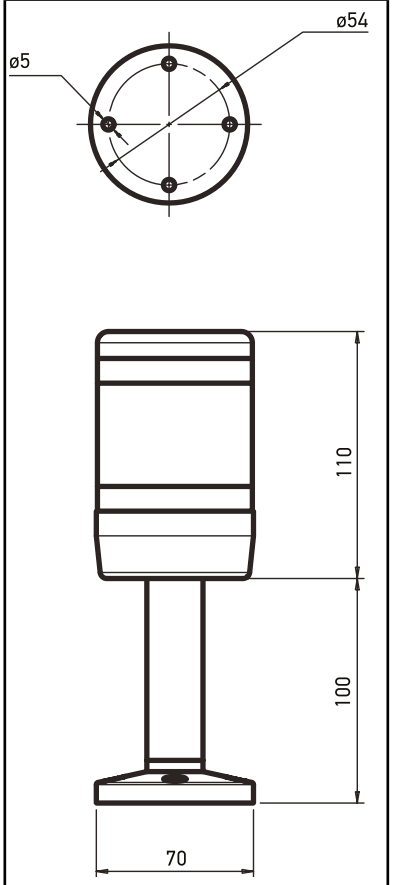
Description	Model
Modular muting lamp	**LMS-1** (95ACC1990)
Muting lamp horizontal fixing	**LMS-2** (95ACC2000)
Muting lamp vertical fixing	**LMS-3** (95ACC2010)
Muting lamp	**LMS** (95ASE1830)
Basic support for LMS-1	**SU-LMS-1A** (95ACC2020)
Tower support for LMS-1	**SU-LMS-1B** (95ACC2030)

MECHANICAL DRAWINGS

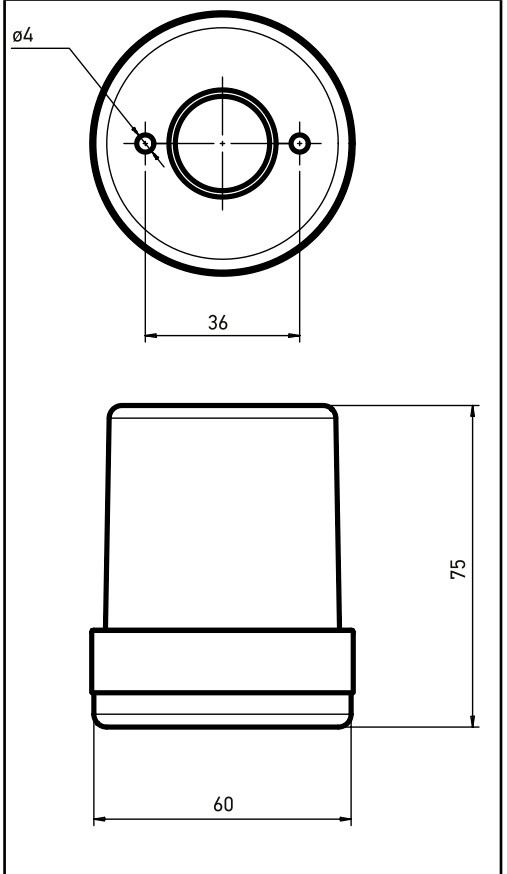
LMS



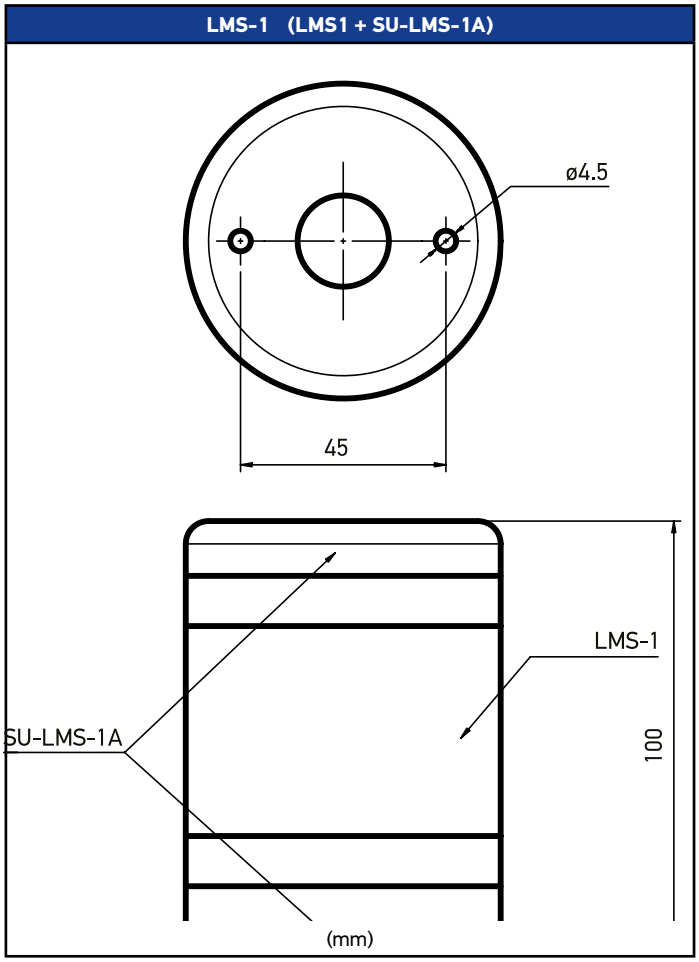
LMS-1 (LMS1 + SU-LMS-1B)



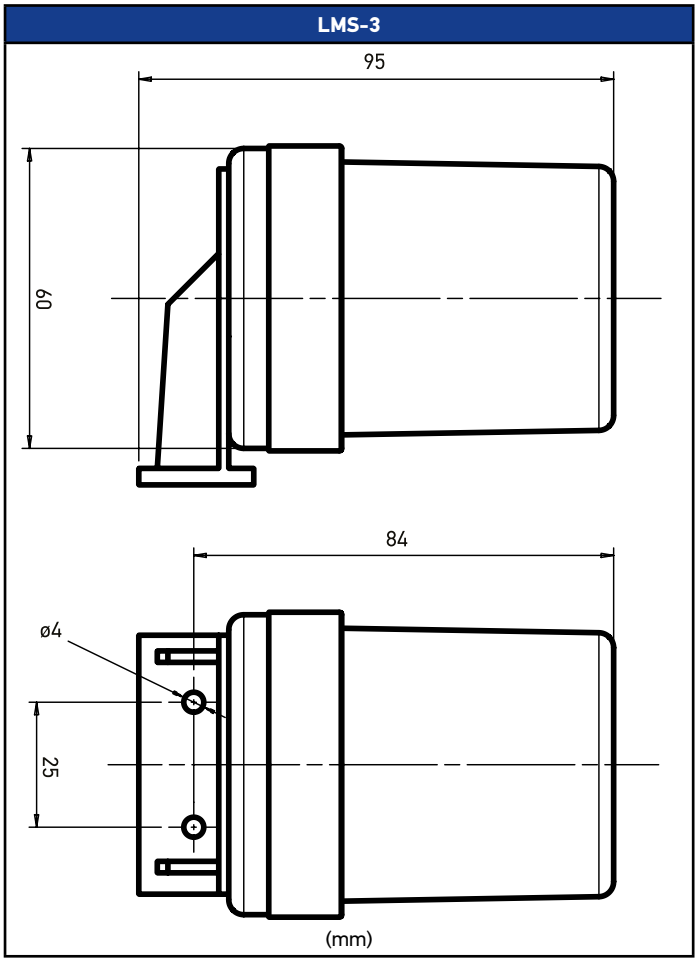
LMS-2



LMS-1 (LMS1 + SU-LMS-1A)



LMS-3



DATASENSING
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WEBSITE



SG-PSB & PSM

STANDS FOR SAFETY LIGHT CURTAINS AND ADJUSTABLE MIRRORS

Robust protective stands for SG and SH4 safety light curtains and SG-DM mirrors. Version with pre-installed adjustable mirros for perimetral protection using 2, 3, 4 beams light curtains.

- Heights from 600 to 1900 mm (stands)
- Heights of 500, 800, 900 and 1200 mm (with 2/3/4 adjustable mirrors)
- Optional plate with springs

CE UK CA

AVAILABLE MODELS

Description	Model
Protective stand for light curtains h=600mm	**SG-PSB-600** (95ASE2240)
Protective stand for light curtains h=1000mm	**SG-PSB-1000** (95ASE2250)
Protective stand for light curtains h=1200mm	**SG-PSB-1200** (95ASE2260)
Protective stand for light curtains h=1650mm	**SG-PSB-1650** (95ASE2270)
Protective stand for light curtains h=1900mm	**SG-PSB-1900** (95ASE2280)
Protective stand with 2 adjustable mirrors h=500mm	**SG-PSM-2-500** (95ASE2300)
Protective stand with 3 adjustable mirrors h=800mm	**SG-PSM-3-800** (95ASE2310)
Protective stand with 4 adjustable mirrors h=900mm	**SG-PSM-4-900** (95ASE2320)
Protective stand with 4 adjustable mirrors h=1200mm	**SG-PSM-4-1200** (95ASE2330)
Plate with springs for protective stands SG-PSB and SG-PSM	**SG-P** (95ASE2290)

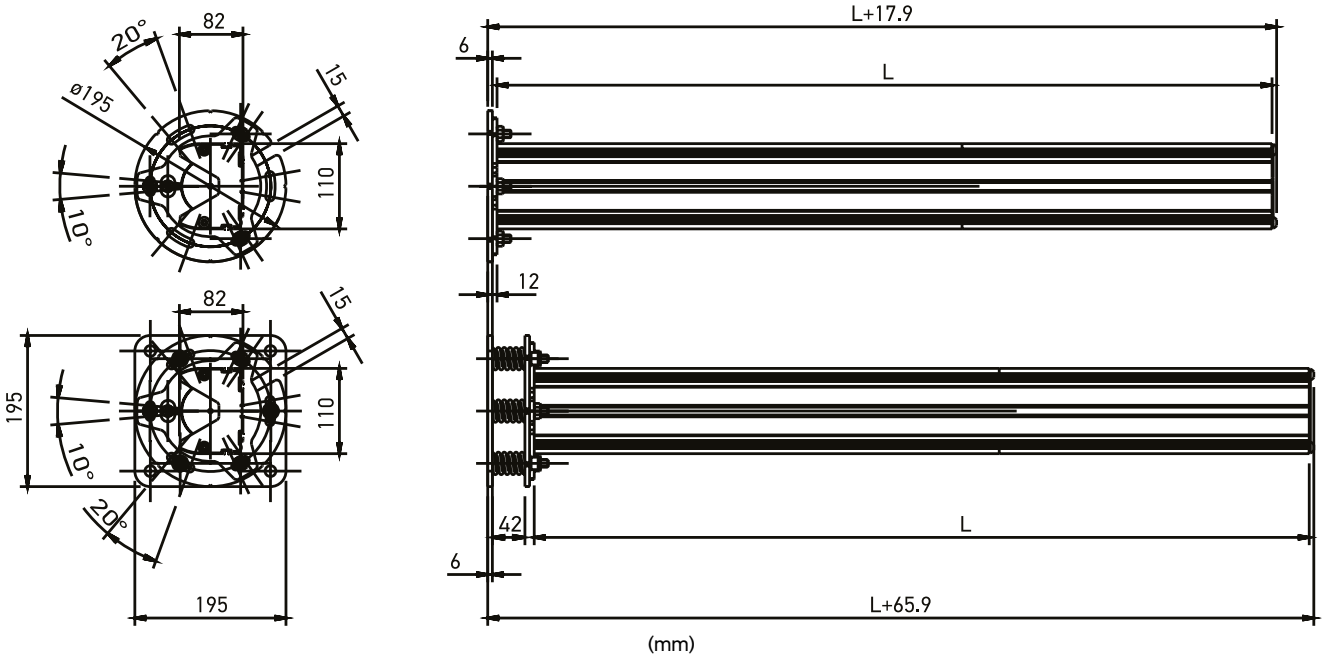
Stands with adjustable pre-mounted mirros, to protect them from accidental collisions.
An industrial steel base made with 2 plates, dowels and spheric level for adjustment of the vertical axis, slots for angular adjustment. The effect of collisions, vibrations and uneven floor surfaces can be compensated by using SG-P plate kit (to be ordered separately).

AVAILABLE MODELS

Description	Model
Deviating mirrors SG-DM mounting kit on SE-S columns	**ST-DM** (95ASE1940)
SG-PSB Protective stand mounting kit for SG BODY BIG 4 brackets	**ST-PS4-SG BODY** (95ASE1730)
SG-PSB protective stand mounting kit for SG BODY BIG 6 brackets	**ST-PS6-SG BODY** (95ASE1740)
SG-PSB protective stand mounting kit for SG/SH4 4 brackets	**ST-PS4-SG-SE** (95ASE1750)
SG-PSB protective stand mounting kit for SG/SH4 6 brackets	**ST-PS6-SG-SE** (95ASE1760)
SG-PSB protective stand mounting kit for mirror SG-DM 2 nuts	**ST-PS-DM** (95ASE1770)

MECHANICAL DRAWINGS

SG-PSB-****

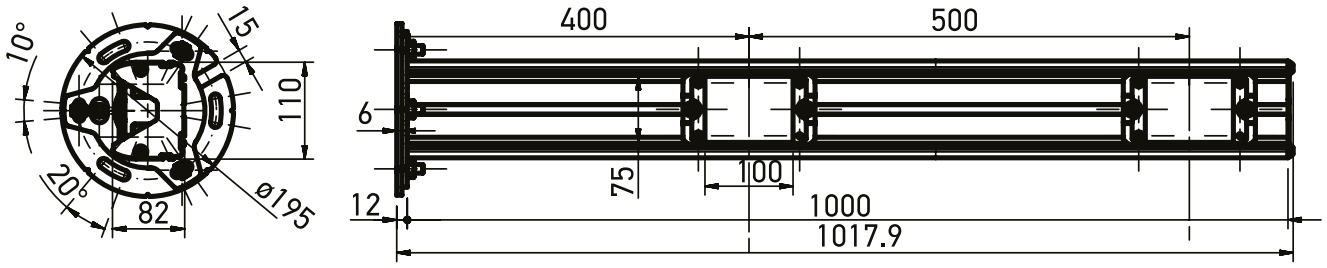


(mm)

Models	L (mm)
SGB-PSB-600	600
SGB-PSB-900	900
SGB-PSB-1200	1200
SGB-PSB-1650	1650
SGB-PSB-1900	1900

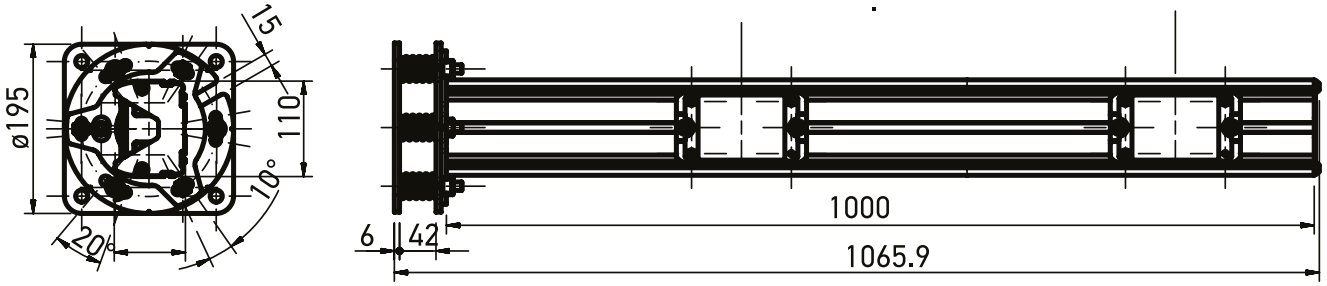
MECHANICAL DRAWINGS

SG-PSM-2-500



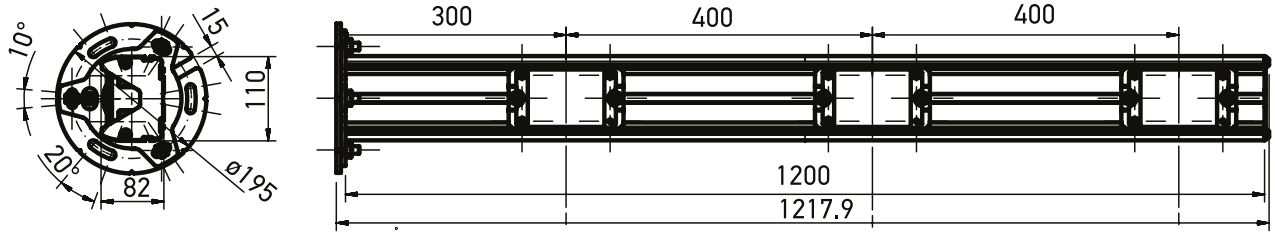
(mm)

SG-PSM-2-500 With SG-PS (plate kit for protective stands)



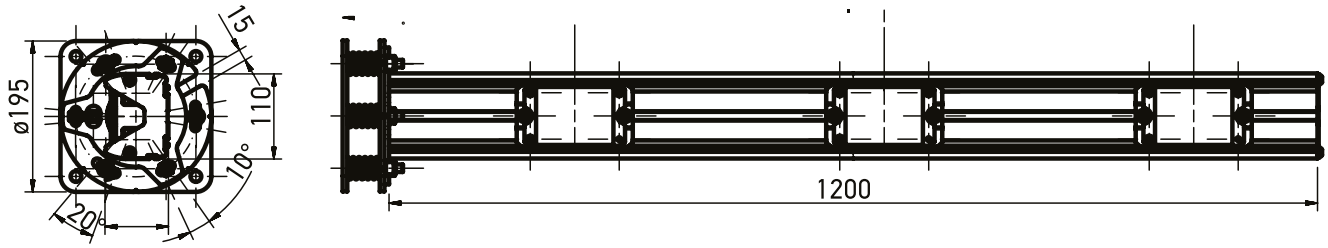
(mm)

SG-PSM-3-800



(mm)

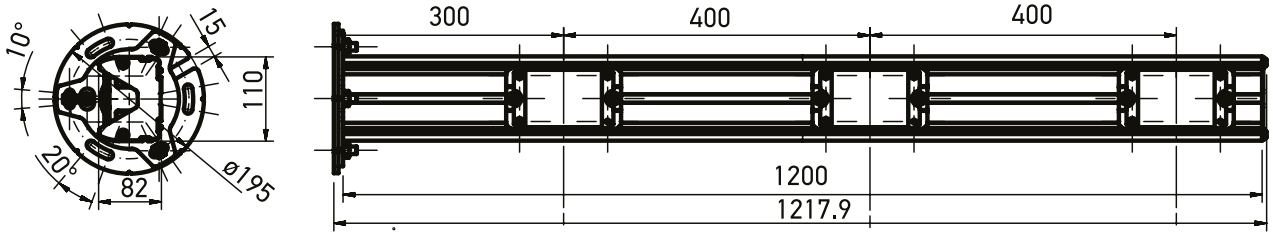
SG-PSM-3-800 With SG-PS (plate kit for protective stands)



(mm)

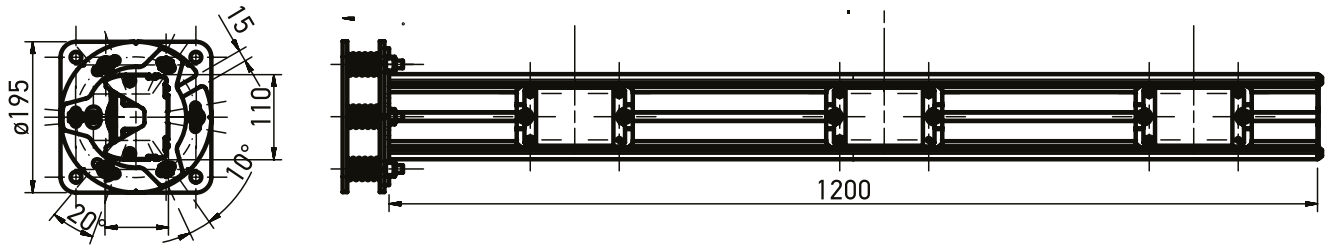
MECHANICAL DRAWINGS

SG-PSM-4-900



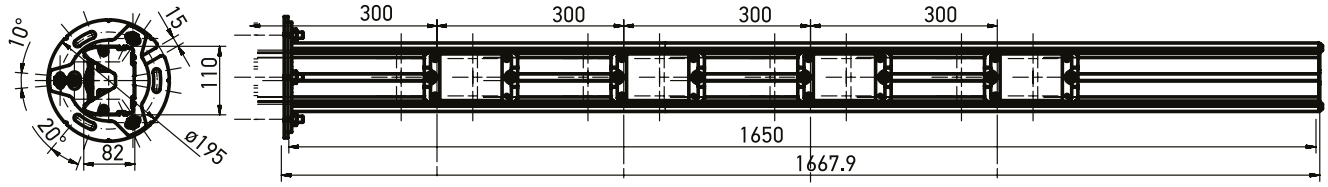
(mm)

SG-PSM-4-900 With SG-PS (plate kit for protective stands)



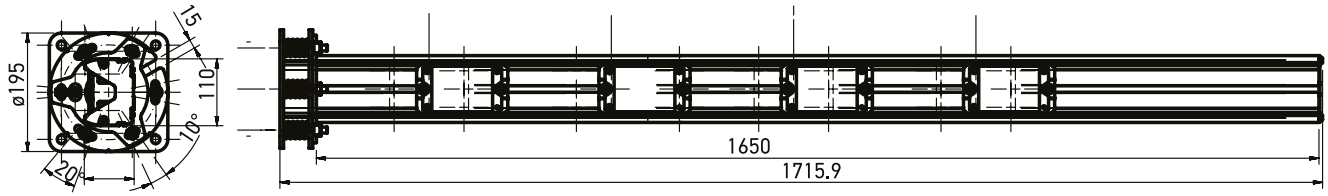
(mm)

SG-PSM-4-1200



(mm)

SG-PSM-4-1200 With SG-PS (plate kit for protective stands)



(mm)

DATASENSING
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WEBSITE

SG-DM

DEVIATING MIRRORS FOR SAFETY LIGHT CURTAINS



Mirrors for safety light curtains with finger/hand resolution. They can be installed in protective stands SG-PSB or floor columns SE-S.

- Heights from 600 to 1900 mm
- Mirror for single beam 150 mm high

CE UK CA

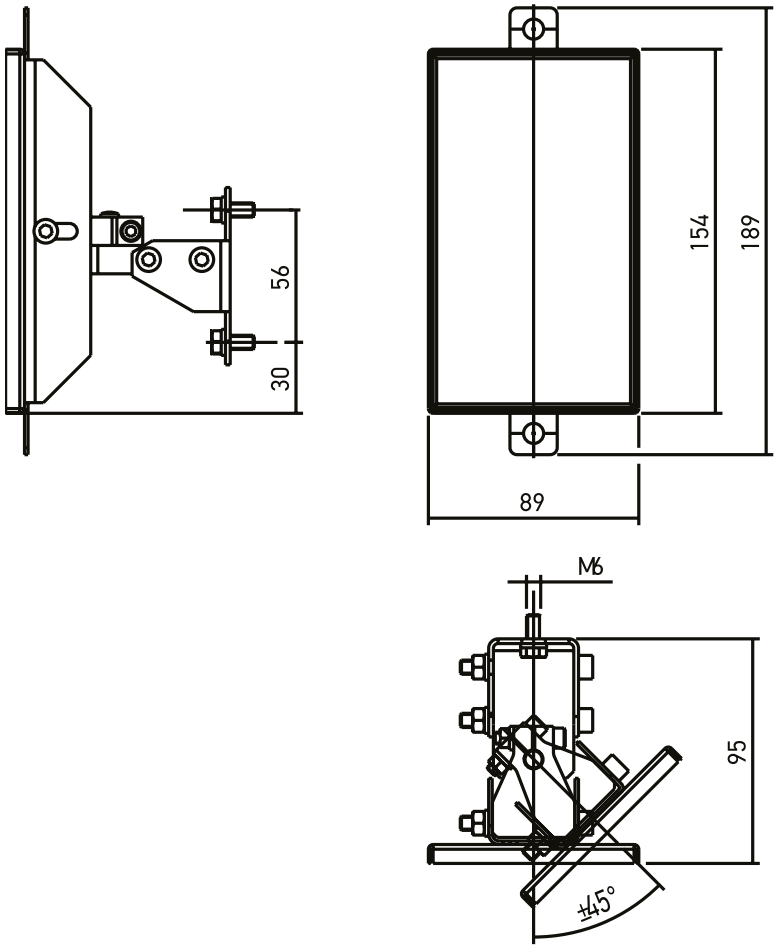
AVAILABLE MODELS

Description	Model
Deviating mirror for light curtains h=150mm	**SG-DM-150** (95ASE1670)
Deviating mirror for light curtains h=600mm	**SG-DM-600** (95ASE1680)
Deviating mirror for light curtains h=900mm	**SG-DM-900** (95ASE1690)
Deviating mirror for light curtains h=1200mm	**SG-DM-1200** (95ASE1700)
Deviating mirror for light curtains h=1650mm	**SG-DM-1650** (95ASE1710)
Deviating mirror for light curtains h=1900mm	**SG-DM-1900** (95ASE1720)

1. To mount these mirrors into the stands SG-PSB, order ST-PS-DM mounting kit
2. To mount these mirrors to columns SE-S, order one ST-DM mounting kit
3. The mirror length has to be at least 100 mm greater than the length of the light curtain's protected area.
Ex. For a SG2-30-090-OO-E (protection height = 900 mm), choose a SG-DM 1200

MECHANICAL DRAWINGS

SG-DM-150

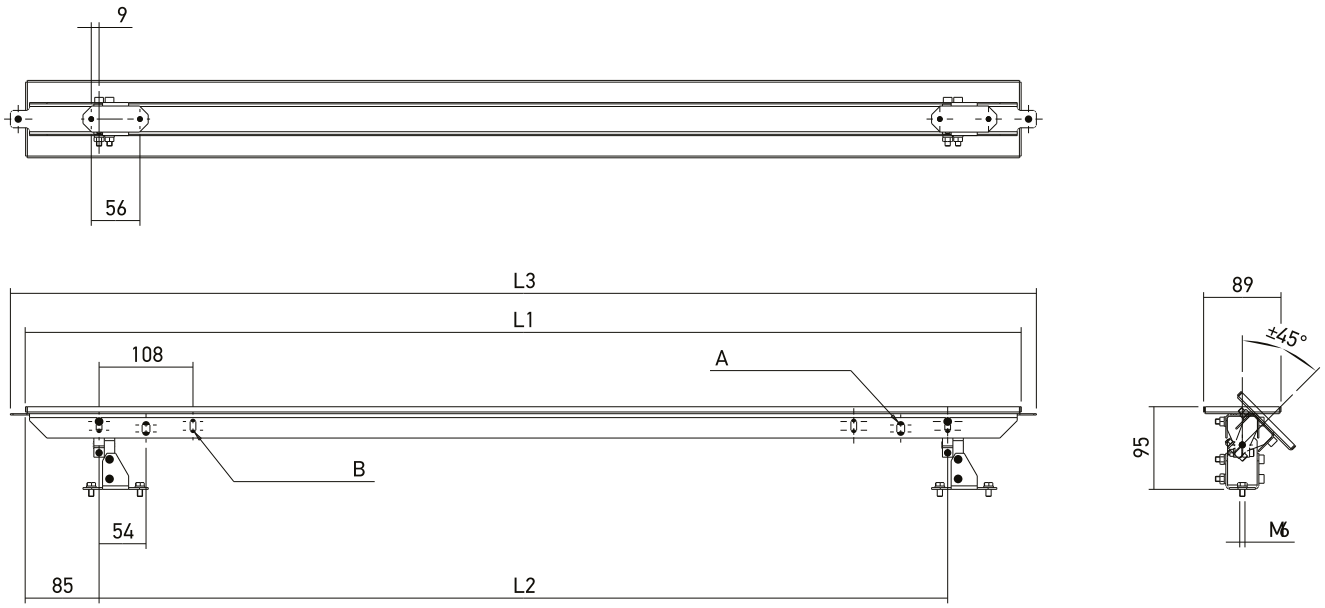


(mm)

1. To mount this mirror into the stands SG-PSB order ST-PS-DM mounting kit 2. To mount this mirrors to columns SE-S, order ST-DM mounting kit

MECHANICAL DRAWINGS

SG-DM-****



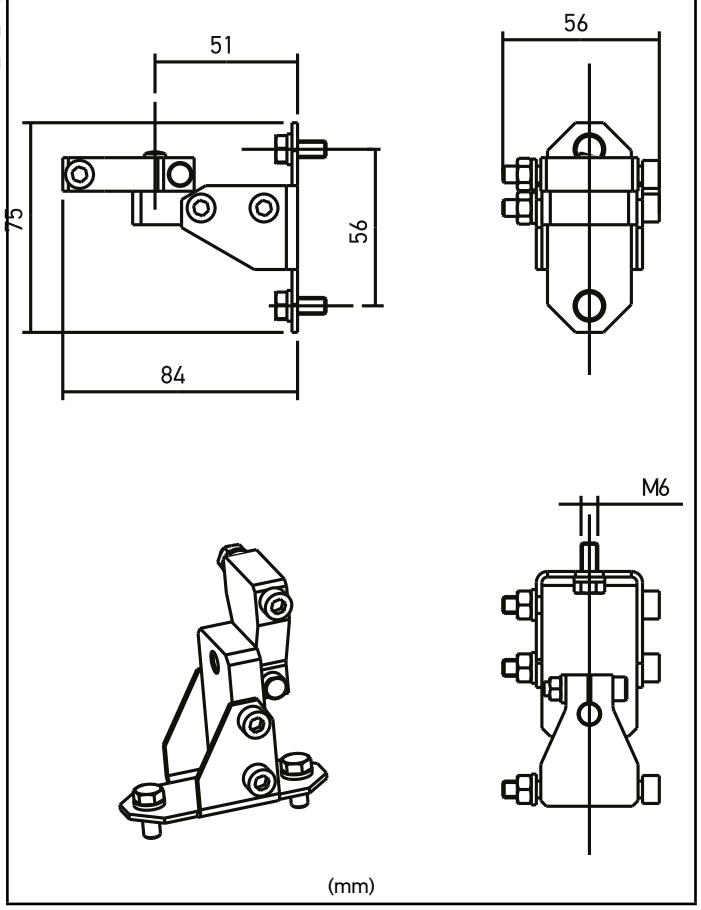
(mm)

The image includes the mirror SG-DM and the bracket mounting kits ST-DM that includes two brackets.

Models	L1 (mm)	L2 (mm)	L3 (mm)	A	B
SG-DM-600	545	376	580	R3,3 x 8 hole	R4,5 x 4 hole
SG-DM-900	845	676	880		
SG-DM-1200	1145	976	1180		
SG-DM-1650	1595	1426	1630		
SG-DM-1900	1845	1676	1880		

MECHANICAL DRAWINGS

ST-DM Deviating mirrors SG-DM mounting kit on SE-S columns



DATASENSING
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WEBSITE

SE-S

FLOOR SUPPORTS FOR SAFETY LIGHT CURTAINS



The floor supports SE-S can be used to install safety light curtains of series SG and SH4, or mirrors SG-DM.

- Available heights: 800, 1000, 1200, 1500, 1800 mm

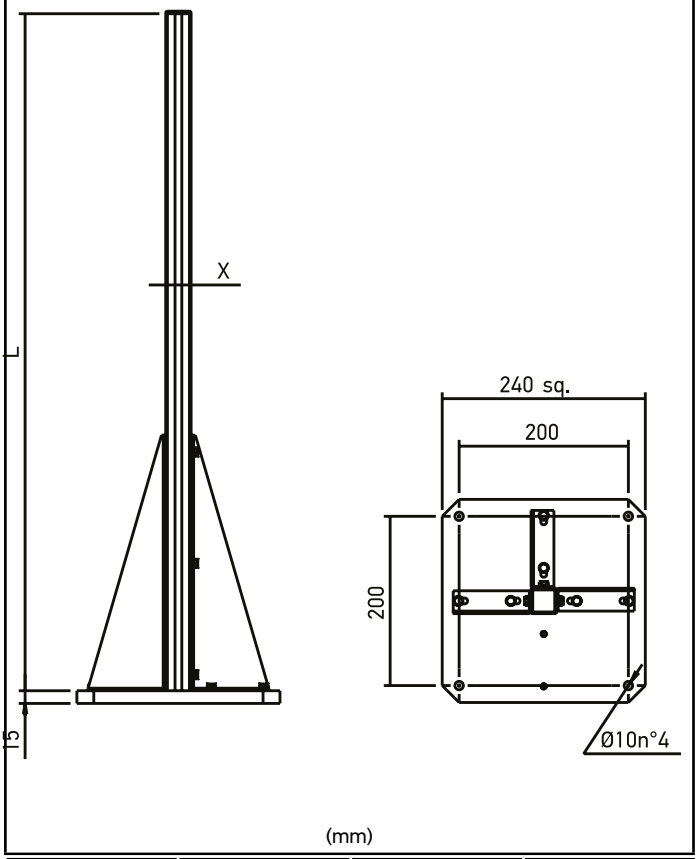
CE UKCA

AVAILABLE MODELS

Description	Model
Column for light curtains and floor stand h=800 mm	**SE-S-800** (95ACC1730)
Column for light curtains and floor stand h=1000 mm	**SE-S-1000** (95ACC1740)
Column for light curtains and floor stand h=1200 mm	**SE-S-1200** (95ACC1750)
Column for light curtains and floor stand h=1500 mm	**SE-S-1500** (95ACC1760)
Column for light curtains and floor stand h=1800 mm	**SE-S-1800** (95ACC1770)

MECHANICAL DRAWINGS

SE-S-****



Models	L (mm)	X (mm)	A (mm)
SE-S-800	800	30 x 30	240 sq.
SE-S-1000	1000		
SE-S-1200	1200		
SE-S-1500	1500	45 x 45	
SE-S-1800	1800		

DATASENSING
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IP69K

WEBSITE

SG-IP69K

PLASTIC IP69K PROTECTION TUBES FOR SG SAFETY LIGHT CURTAINS



PMMA acrylic tubes used to protect and seal safety light curtains of series SG2 BASE; SG2 EXTENDED, SG4, SG4 BODY COMPACT.

- Heights from 150 to 1800 mm (finger/hand)
- Heights of 500, 800, 900 and 1200 mm (body)
- Compatible with SG2 BASE; SG2 EXTENDED, SG4, SG4 BODY COMPACT

CE UKCA

AVAILABLE MODELS

Description	Model
IP69K protection tubes for SG BASE h=150mm	**SG-IP69K-150** (95ASE1290)
IP69K protection tubes for SG BASE h=300mm	**SG-IP69K-300** (95ASE1300)
IP69K protection tubes for SG BASE h=450mm	**SG-IP69K-450** (95ASE1310)
IP69K protection tubes for SG BASE h=600mm	**SG-IP69K-600** (95ASE1320)
IP69K protection tubes for SG BASE h=750mm	**SG-IP69K-750** (95ASE1330)
IP69K protection tubes for SG BASE h=900mm	**SG-IP69K-900** (95ASE1340)
IP69K protection tubes for SG BASE h=1050mm	**SG-IP69K-1050** (95ASE1350)
IP69K protection tubes for SG BASE h=1200mm	**SG-IP69K-1200** (95ASE1360)
IP69K protection tubes for SG BASE h=1350mm	**SG-IP69K-1350** (95ASE1370)
IP69K protection tubes for SG BASE h=1500mm	**SG-IP69K-1500** (95ASE1380)
IP69K protection tubes for SG BASE h=1650mm	**SG-IP69K-1650** (95ASE1390)
IP69K protection tubes for SG BASE h=1800mm	**SG-IP69K-1800** (95ASE1400)

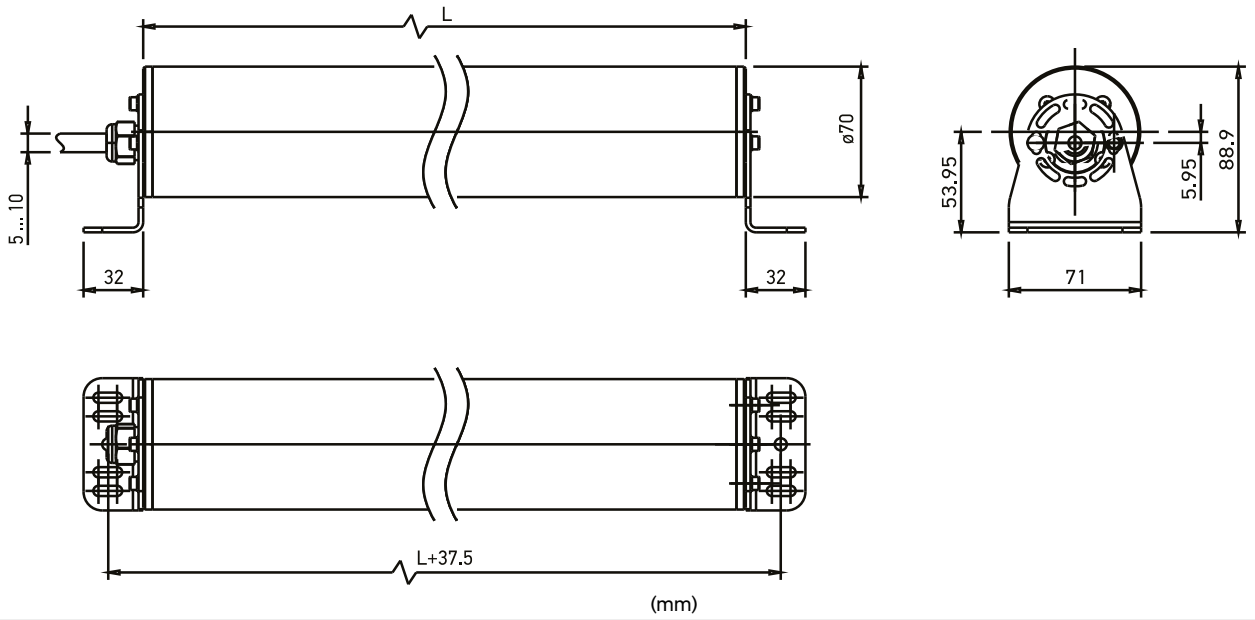
AVAILABLE MODELS

Description	Model
IP69K protection tubes for SG COMPACT h=500mm	**SG-IP69K-2-050** (95ASE1410)
IP69K protection tubes for SG COMPACT h=800mm	**SG-IP69K-3-080** (95ASE1420)
IP69K protection tubes for SG COMPACT h=900mm	**SG-IP69K-4-090** (95ASE1430)
IP69K protection tubes for SG COMPACT h=1200mm	**SG-IP69K-4-120** (95ASE1440)

1) Each package contains the necessary to protect a single unit (emitter or receiver).
To protect both elements of a couple, order two pieces
2) Tubular PMMA POLICRIL material chemical resistance table is available on product's datasheet.

MECHANICAL DRAWINGS

SG-IP69K-*-**



(mm)

Models	L (mm)
SG-IP69K 150	373.5
SG-IP69K 300	520.7
SG-IP69K 450	670.8
SG-IP69K 600	820.7
SG-IP69K 750	970.8
SG-IP69K 900	1120.7
SG-IP69K 1050	1270.7
SG-IP69K 1200	1420.8
SG-IP69K 1350	1570.7
SG-IP69K 1500	1720.8
SG-IP69K 1650	1870.8
SG-IP69K 1800	2020.8
SG-IP69K-2-050	813
SG-IP69K-3-080	1113
SG-IP69K-4-090	1213.5
SG-IP69K-4-120	1513

DATASENSING
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WEBSITE

SH4 PLUGS



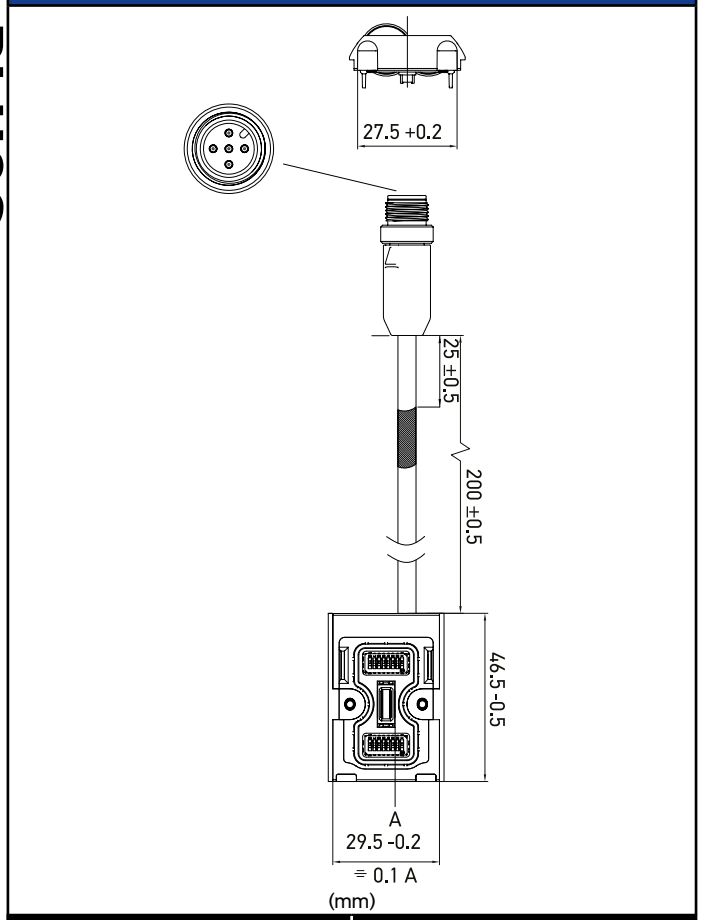
Spare parts can be ordered in substitution of the parts included in SH4 family safety light curtains.

AVAILABLE MODELS

Description	Model
SH4 plug M12 5 poles	**SH-PLUG-5** (95ASE0047)
SH4 plug M12 8 poles	**SH-PLUG-8** (95ASE0048)
SH4 plug M12 12 poles	**SH-PLUG-12** (95ASE0049)
SH4 plug M12 5 poles + 5 poles	**SH-PLUG-5-5** (95ASE0050)
SH4 plug M12 8 poles + 5 poles	**SH-PLUG-8-5** (95ASE0051)
SH4 plug M12 12 poles + 5 poles	**SH-PLUG-12-5** (95ASE0052)
Caps for M12 connectors of SH4 2 pcs	**SH-SP** (95ASE0043)

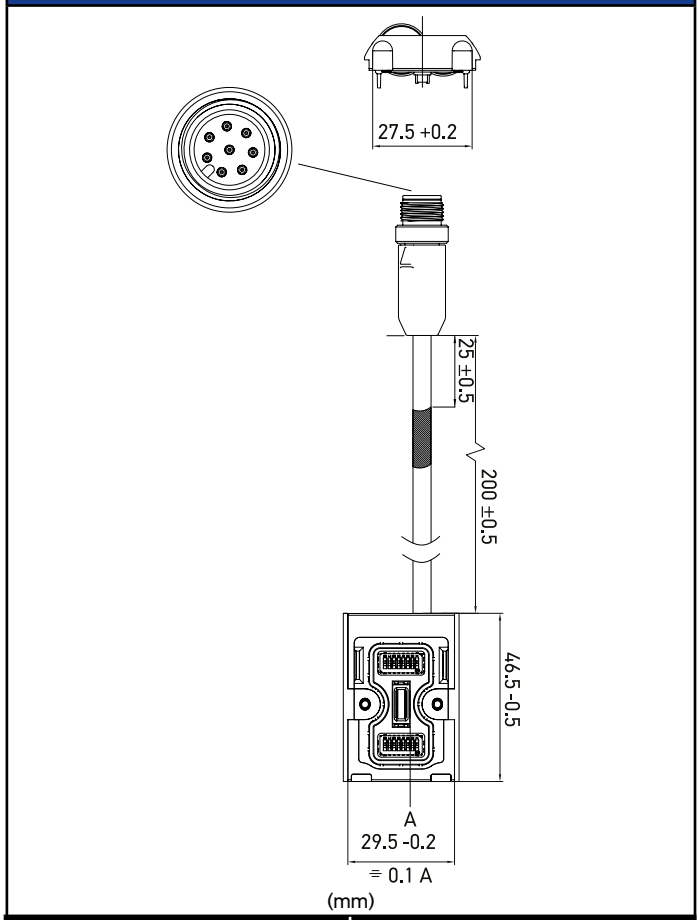
On SH4 safety light curtain substitute plugs only with the same type originally installed.

SH-PLUG-5



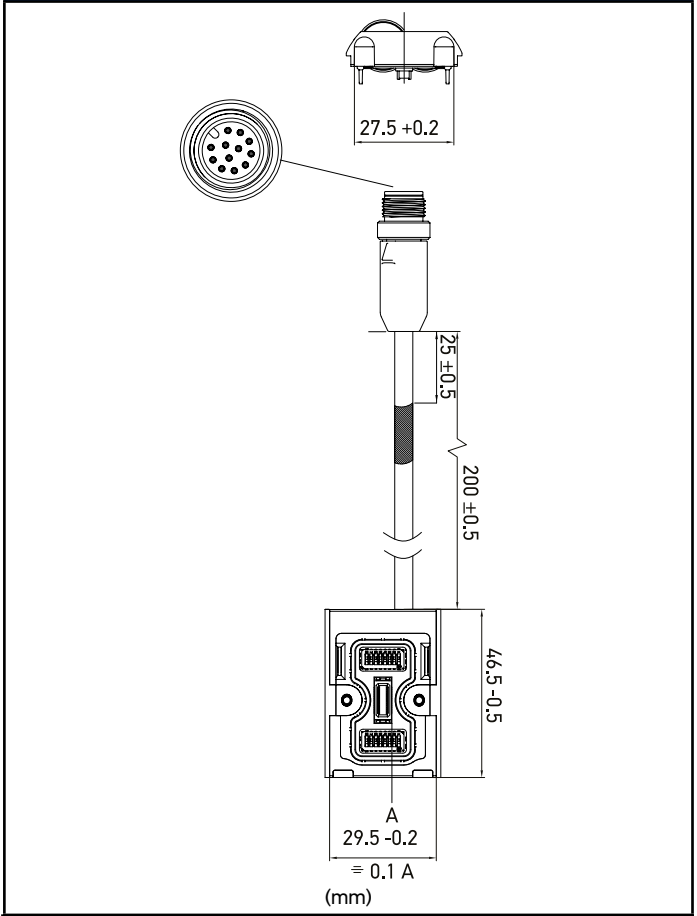
Model	Main connector
SH-PLUG-5	5-pin M12 male

SH-PLUG-8



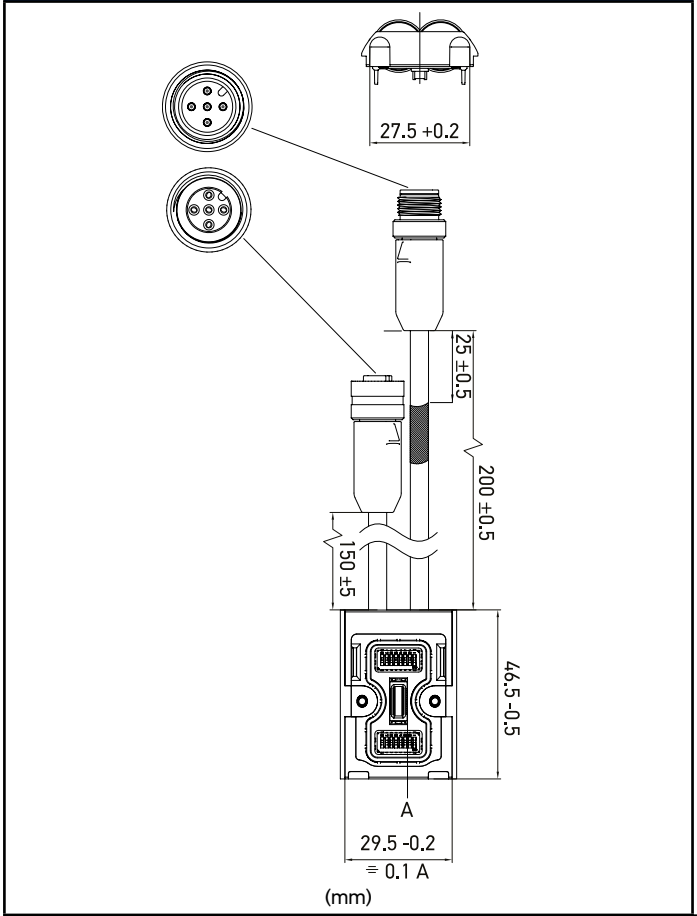
Model	Main connector
SH-PLUG-8	8-pin M12 male

SH-PLUG-12



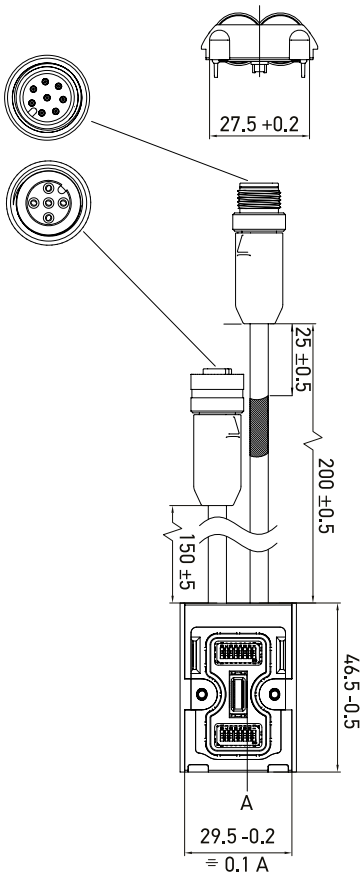
Model	Main connector
SH-PLUG-12	12-pin M12 male

SH-PLUG-5-5



Model	Main connector	Secondary connector
SH-PLUG-5-5	5-pin M12 male	5-pin M12 female

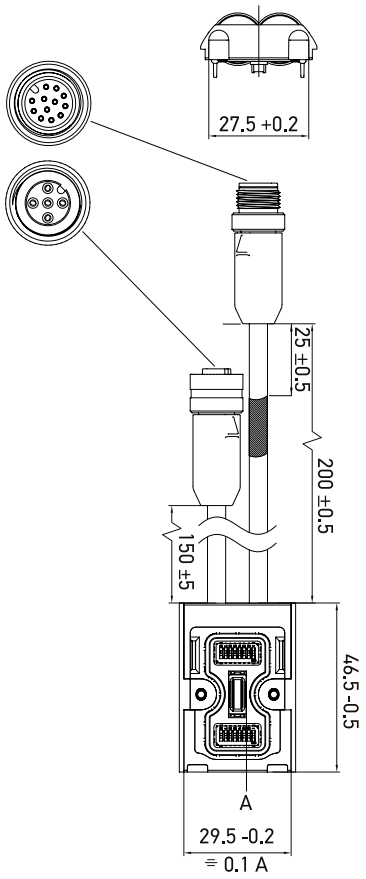
SH-PLUG-8-5



(mm)

Model	Main connector	Secondary connector
SH-PLUG-8-5	8-pin M12 male	5-pin M12 female

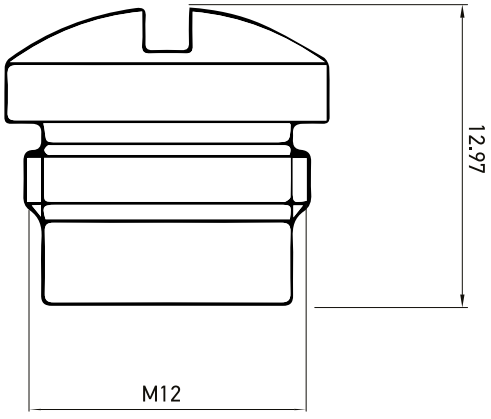
SH-PLUG-12-5

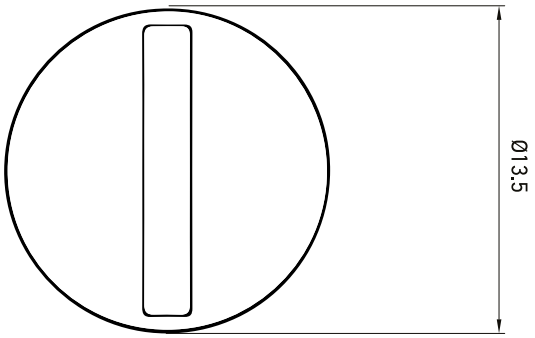


(mm)

Model	Main connector	Secondary connector
SH-PLUG-12-5	12-pin M12 male	5-pin M12 female

SH-SP





(mm) When female secondary connector of SH4 are not used, use a SH-SP plug to isolate them

WEBSITE

SH

SH4 REFLECTIVE TARGET FOR LED INTEGRATED POINTER



Retroreflective target for SH4 Body Advanced Alignment

AVAILABLE MODELS

Description	Model
Retroreflective target for SH4 Body Advanced Alignment	**SH-TARGET** (95ASE0046)

DATASENSING
easing automation challenges

WEBSITE

SLS-MG



SLS memory group spare part for configuration and firmware backup suitable for SLS fast replacement in field.

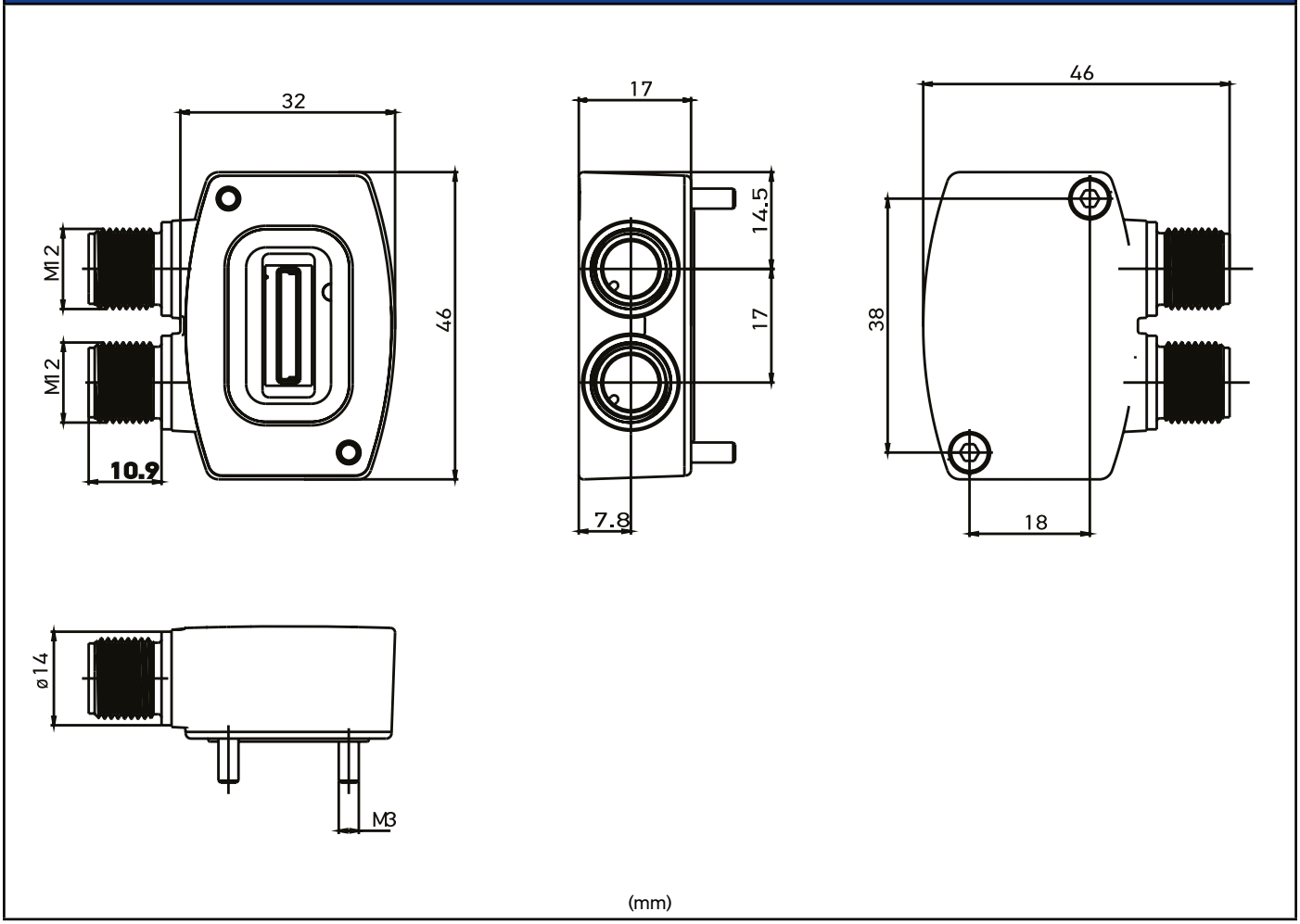
•

AVAILABLE MODELS

Description	Model
SLS-MG-1708	**SLS-MG-1708** (95ASE2950)
SLS-MG-0812	**SLS-MG-0812** (95ASE2960)
Memory group fieldbus model	**SLS-MG-FBUS** (95ASE0105)

MECHANICAL DRAWINGS

SLS-MG-****



(mm)

DATASENSING
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WEBSITE

SLS WINDOW
REPLACEMENT WINDOW



SLS Optical Window spare parts.

•

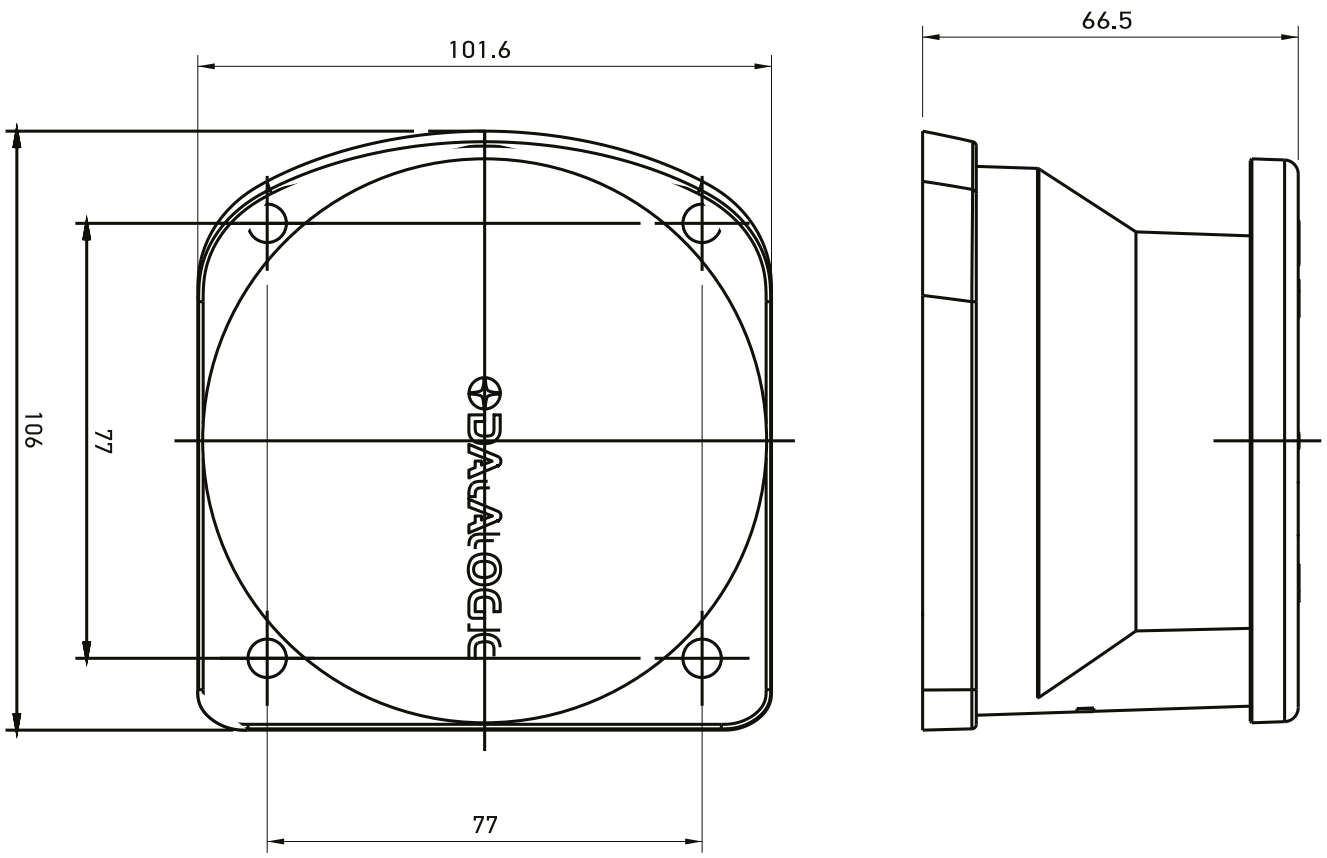
CE UKCA

AVAILABLE MODELS

Description	Model
SLS-WINDOW	**SLS-WINDOW** (95ASE2971)

MECHANICAL DRAWINGS

SLS-WINDOW



(mm)

DATASENSING
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WEBSITE

SLS



CE UK CA

AVAILABLE MODELS

Description	Model
SLS-CLEANER	**SLS-CLEANER** (95ASE2990)
SLS-CLOTH	**SLS-CLOTH** (95ASE3000)

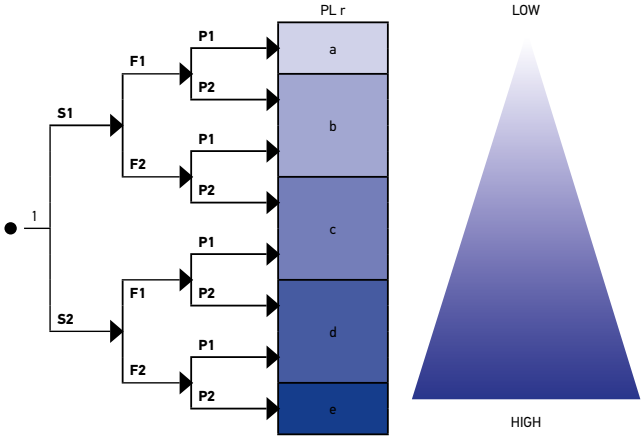
DATASENSING
easing automation challenges

APPENDIX

1. Performance level (pl) and required performance level (plr)

Performance level is one of five discrete levels (a, b, c, d, e) that specify the ability of the safety-related part of a control system to perform a specific safety function. The performance level depends on the system design, the reliability of components used, the diagnostic coverage of dangerous faults , and on the ability of the safety parts to avoid common cause and systematic faults.
The minimum required Performance Level (PLr) to reduce a risk is determined by following the diagram in fig. 1, which takes into account three factors: the severity of injury, the frequency of exposure to hazard, and the possibility to avoid the hazard. Performance level and its calculation methods are described in EN ISO 13849-1.

Fig. 1 Required Performance Level



Risk parameters

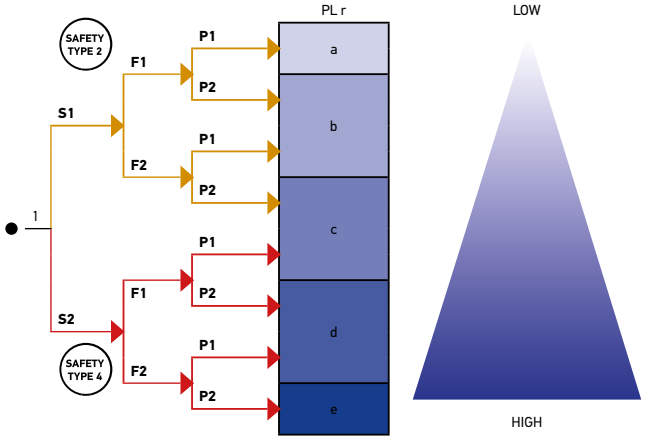
S: severity of injury
S1: slight (normally reversible injury)
S2: serious (normally irreversible injury or death)
F: frequency and/or exposure to hazard
F1: seldom-to-less-often and/or exposure time is short
F2: frequent-to-continuous and/or exposure time is long
P: possibility of avoiding hazard or limiting harm
P1: possible under specific conditions
P2: scarcely possible

2. Type

Safety sensors whose function is to detect the interruption of beams by an object are called Active Optoelectronic Protective Devices (AOPD). AOPDs are classified in two Types (Type 2 and Type 4) depending on their design and optical performance. The optical performance is dependent on the maximum limit of the effective aperture angle (EAA), that is -/+5° for Type 2, and -/+ 2.5° for Type 4. A lower EAA results in a more focused beam. Type and Performance Level are directly correlated. The maximum PL that can be reached for a safety function that includes the use of a Type 2 AOPD is PL c, while for a Type 4 AOPD, the maximum is PL e. Based on these considerations, to reduce the highest risks on machines, Type 4 AOPDs should be used (see Fig. 2). Active optoelectronic protective devices and corresponding Types are described in IEC 61496-1 and IEC 61496-2

SAFETY TYPE 2

SAFETY TYPE 4



Key

1 starting point for evaluation of safety function's contribution to risk reduction
L low contribution to risk reduction
H high contribution to risk reduction
PLr required performance level

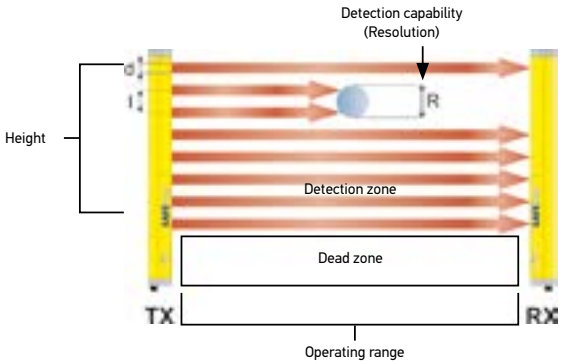
Risk parameters

S severity of injury
S1 slight (normally reversible injury)
S2 serious (normally irreversible injury or death)
F frequency and/or exposure to hazard
F1 seldom-to-less-often and/or exposure time is short
F2 frequent-to-continuous and/or exposure time is long
P possibility of avoiding hazard or limiting harm
P1 possible under specific conditions
P2 scarcely possible

3. Detection Capability (or Resolution)

The detection capability of a light curtain is the diameter of the smaller object that will activate the device when it's placed in any point of the detection zone. The value of the detection capability, together with response time, is crucial to calculating the minimum safety distance required between the light curtain and the dangerous zone.
For single light beam sensors and for multiple light beams sensors (2, 3 or 4 beams), in place of detection capability, it's common to use the number of light beams. In this case, their purpose is to provide "body protection", detecting the passage of the entire body of a person.
For an introduction to the minimum safety distance calculation rules (described in EN 13855) see page 94 and the light curtain's technical documentation.

Fig. 2 Required Performance Level

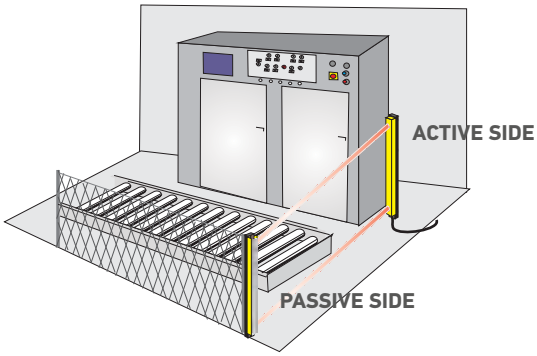


If the light curtain is retroreflective, the operating range is the distance between the active and the passive element.
Light curtains can have a "dead zone", in which they are not able to detect the object due to the absence of beams. When it is required that the dimension of the light curtain corresponds exactly to the height of its detection zone, the light curtain is said to have zero dead zone.

5. Retroreflective light curtains

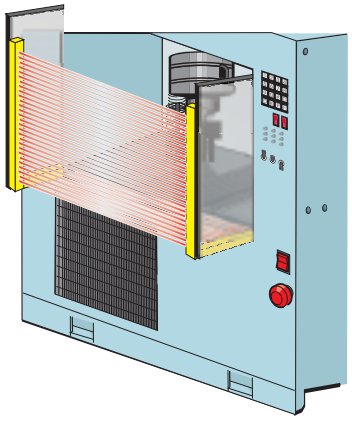
2, 3 and 4 beams light curtains can be manufactured with all emitters and receivers on one side, and passive elements (mirrors) on the other side. The advantage of using a retroreflective light curtain is that only one side needs to be powered on.

Fig. 4 Retroreflective Light Curtain



6. Cascading

Cascading is when two or more light curtains are connected to each other, re sulting in one system that functions as a single light curtain.
Advantages of cascading are: better monitoring of dangerous areas with presence detection beyond the vertical detection zone and space and cost savings by using a single safety unit.



7. Response time

The response time is the maximum time occurring between the detection of the test object in the detection zone and the activation of the light curtain's outputs. It is a safety relevant parameter, and its value must be taken in account when calculating the position in which the safety sensor will be placed in relation to the dangerous area.

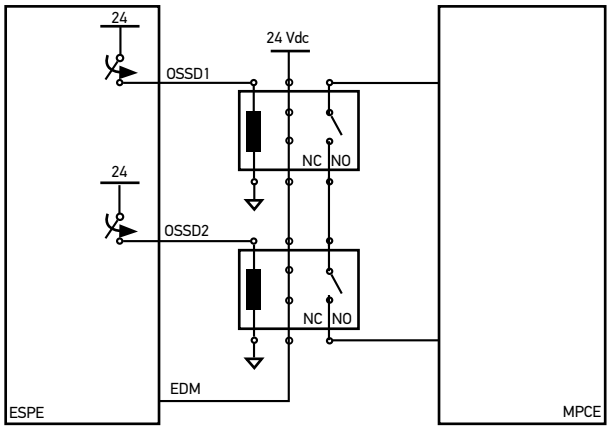
8. Manual or automatic restart

Depending on the initial risk analysis of the machine, a start or restart interlock can be a safety requirement of the control system. It prevents an automatic restart of the machine during a dangerous part of the operating cycle after activation of the sensing device, or when the electrical supply of the sensor is switched on or restored after interruption.
This interlock can be implemented by a manual restart of the safety controller or by the light curtain itself.

9. External Device Monitoring (EDM)

EDM is a function that allows the electro-sensitive protective equipment (ESPE) to monitor the state of control devices (i.e. contactors, actuators) that are driven by its outputs.
This function can be achieved by the safety controller or directly by the light curtain.

Fig. 6 External Device Monitoring wiring diagram



10. Muting

Muting is the temporary automatic suspension of a safety function. When a light curtain is muted, its outputs will remain ON even if an object is detected in the detection zone.
Because muting suspends a safety function, it must be implemented with all necessary precautions and in compliance with the machine-specific safety requirements.
T muting is a specific kind of muting that can be used to allow the passage of material through an opening in direction of the dangerous area or in both directions. L muting can be used only if material exits the dangerous area.

Fig. 7 Safety Light Curtain with Integrated L muting actuator

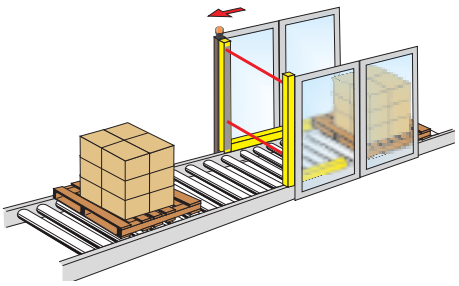
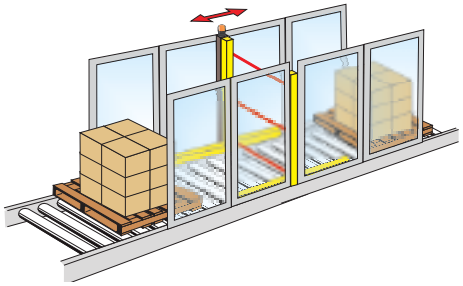
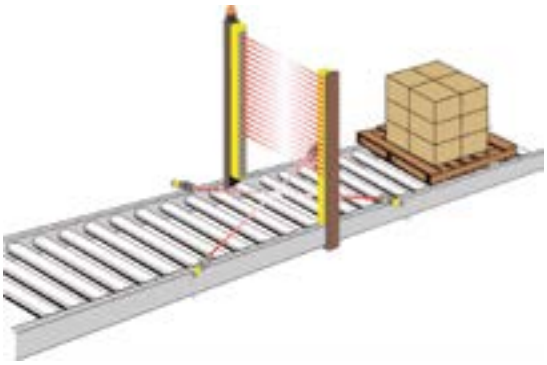


Fig. 8 Safety Light Curtain with Integrated T muting actuator



Light curtains can be provided with muting arms, with pre-wired sensors detecting the passage of material, or can be used with external muting sensors.

Fig. 9 Safety light curtain with external crossed beams muting sensors



Muting lamps integrated in the light curtains, or installed external to them, are designed to flash as long as the muting is active.

Fig. 10 Integrated muting lamps



To maintain the safety of the application, light curtains can be configured to perform the muting function only on the number of beams needed for the passage of the material (Partial Muting), keeping the others active.

11. Override

Override function is a mute dependent bypass of the light curtain, that can be provided for some applications (for example conveyor and packaging machinery) in order to clear a blockage in the area of the machine where sensors are located. The activation of the bypass function should be possible for a limited amount of time, only when at least one muting sensor is activated, and will require the use of a device located where operator can see the point of hazard.

12. Blanking.

The blanking function is used when an object detected in a defined part of the detection zone must not cause an OFF-state of the light curtains outputs.
Blanked beams are monitored so that the absence or a change in the size or location of the object causes the light curtain's outputs to go to the OFF-state.
Fixed blanking is when the object must remain in a fixed position, with a given tolerance. Floating blanking is when the object can move along the detection zone. Depending on the configuration of the light curtain, in floating blanking the object can also leave the detection zone or not. Reduced resolution is a particular kind of floating blanking, with light curtain outputs going OFF-state only when a pre-defined number of beams adjacent are interrupted, in any position along the light curtain. When reduced resolution is active, more than one small object can interrupt the light curtain beams without its output going OFF.

Fig. 11 Floating blanking

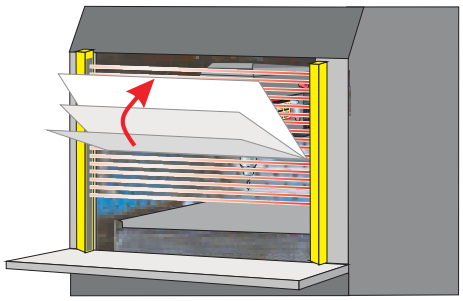
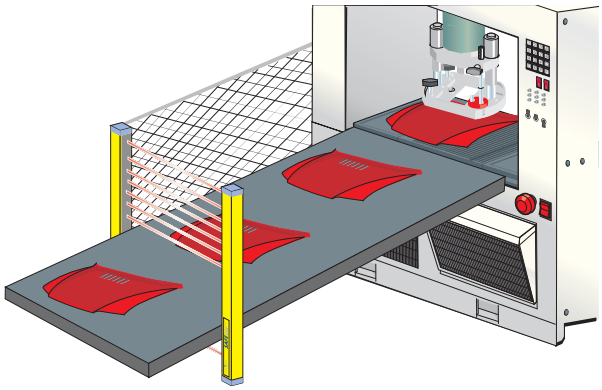


Fig. 12 Fixed blanking with tolerance



13. Software configuration

Setting DIP-Switch or through wiring, it is possible to set typical parameters like manual or auto reset, EDM enable or disable, muting type selection, as well as auto-teach blanking function.
A software configurator (Graphic User Interface, GUI) is required for more advanced functionality, such as setting the muting timeout with 1-second steps, or designing complex patterns for floating or fixed blanking.

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