Safe Robotics Area Protection
Open access for safe productivity

SICK
Sensor Intelligence.

Safe Robotics Area Protection

Safe productivity with Safe Robotics Area Protection

With Safe Robotics Area Protection, SICK is offering safety systems which serve as the basis for quick and easy protection of freely-accessible robot applications. This means that, in addition to complete safety, it enables the highest levels of productivity. The focus is on close and safe collaboration between humans and robots. Safe Robotics Area Protection has the right system for every application: The sBot Speed and sBot Speed CIP systems reduce the robot speed when approached appropriately, while the sBot Stop system triggers a safe stop.

Increase productivity
Thanks to freely-accessible robot applications with reduced speed, prevention of unnecessary machine stops and the option of automated restart.
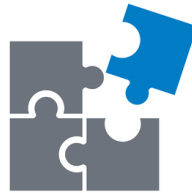
Stay flexible
Thanks to individualized adjustment of safety systems and modular expansion, making it possible to arm yourself for changing requirements and future challenges.

Save time and money
Thanks to pre-selected safety hardware components, safe, pre-configured and tested control logic, and detailed documentation. This makes integration into your robot control quick and easy.

Increase your productivity for robot applications

With speed reduction for fewer downtimes

The sBot Speed system variants adapt robot operation to the respective position of the worker, thus reducing downtime, optimizing workflows and increasing productivity. On the hardware side, they consist of a safety laser scanner, the Flexi Soft safety controller or the robot controller, thus enabling both safety and flexibility. sBot Speed can be easily integrated into the most common robot controllers thanks to robot-specific settings and detailed documentation, and configured directly via the robot hardware (UR Teach Pendant) thanks to sBot Speed – URCap.

High machine availability
Thanks to speed reduction and the option of automated restart, you can reduce downtime.

Flexible safety system
Optimally adapt the fields of the safety laser scanner to the application environment and implement additional safety functions into the safety controller at any time.

Increase your machine availability with sBot Speed

sBot Speed is available in different variants:

sBot Speed (manufacturer-specific)
sBot Speed – YA (YASKAWA)
sBot Speed – UR (Universal Robots)
Reduction in robot speed thanks to field set switchover with the option of automated restart.

sBot Speed – URe (Universal Robots)
Simultaneous protective field monitoring with automated or manual restart.

sBot Speed – URCap (Universal Robots)
sBot Speed – ABB
Intuitive configuration software for UR and ABB allows a field configuration of up to two safety laser scanners at the same time that is automatically adapted to the application environment. This saves you time when commissioning your robot application.

More options for challenging robot applications

The sBot Speed CIP system variants are available for both FANUC robots (sBot Speed CIP – FA) and KUKA robots (sBot Speed CIP – KU) and enable safe simultaneous monitoring of multiple protective fields. This makes this safety system suitable for freely-accessible robot applications in which persons can walk behind the protected area, for example in palletizer systems. The system variants combine the microScan3 Core – EFI-pro safety laser scanner with the Flexi Soft safety controller and the EFI-pro gateway. Thanks to EtherNet/IP™ CIP Safety™ and the robot-specific settings of sBot Speed CIP, the system variants can be integrated into the robot controller quickly and safely. In addition, communication between safety system and robot control is easy to set thanks to the pre-configured parameters.

EtherNet/IP™ CIP Safety™
Benefit from optimal, safe robot integration, the ability to set additional functions, and reduced cabling requirements.

All-around protection
Simultaneous field monitoring enables the protection of applications that can be freely accessed from behind.

Easy integration and protection of applications accessible from behind thanks to CIP Safety

sBot Stop

The simple solution for immediate automated restart

The generic variant sBot Stop allows a compact machine design with a minimal safety distance to the hazardous area thanks to a combination of safety laser scanner, safety light curtain or multiple light beam safety device, and a Flexi Classic safety controller. Safety functions are available as prefabricated, tested functional logic for the non-programmable Flexi Classic safety controller and can be selected quickly and easily using a rotary switch.

The sBot Stop – URCap system variant, which combines the advantages of a safety laser scanner for protection with the intuitive sBot – URCap software, allows the safety system to be configured and operated quickly and easily directly via the robot hardware (Universal Robots Teach Pendant).

Safe Robotics Area Protection

Save time
Thanks to the possibility of quick and easy configuration via rotary switch or intuitive software.
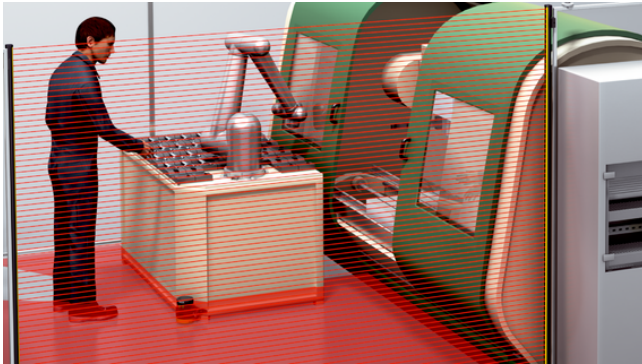

Simple and intuitive
Thanks to the possibility of quick and easy configuration via rotary switch or intuitive software.
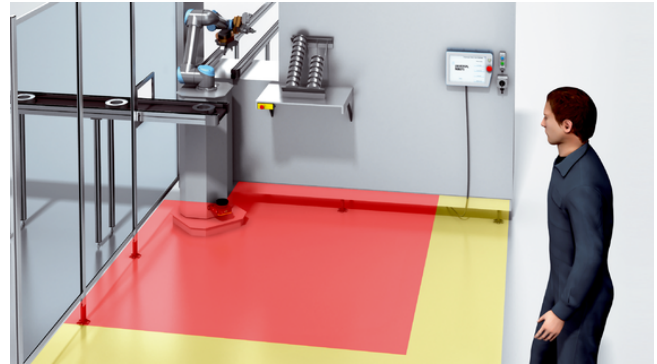

Benefit from easy handling

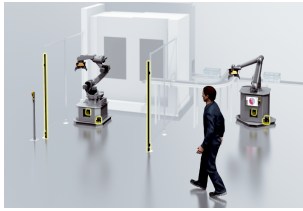## sBot Stop is available in different variants:

sBot Stop
With 11 different variants to choose from, we have the right solution to quickly bring your machine to a safe stop.

sBot Stop – URCap
Configure the safety system quickly and easily directly via the Teach Pendant of the eSeries robot from Universal Robots.

Technical data overview

Safety task	Hazardous area protection
Application	Robot
Description	sBot Stop - URCap is a safety system for UR robots that makes it easy to protect your freely accessible robot application. The system ensures a safe stop with automatic restart of the robot. The nanoScan3 safety laser scanner is used to detect an approaching person. Using the nanoScan3 Tool - URCap, the safety laser scanner can be configured quickly and easily directly via the teach pendant of the robot.
	sBot Stop2 - URCap is a safety system for UR robots that makes it easy to protect your freely accessible robot application. The system ensures a safe stop with automatic restart of the robot. Thanks to the two nanoScan3 safety laser scanners, approaching persons are detected over a 360-degree range. Using the nanoScan3 Tool - URCap, the safety laser scanner can be configured quickly and easily directly via the teach pendant of the robot.
	sBot Speed – URCap is a safety system for UR robots that makes it easy to protect your freely accessible robot application. The system reduces downtimes thanks to the reduction in speed of the robot according to the specific position of the worker, and the option of automatic restart. The nanoScan3 safety laser scanner is used to detect an approaching person. Using the nanoScan3 Tool - URCap, the safety laser scanner can be configured quickly and easily directly via the teach pendant of the robot.
	sBot Speed2 - URCap is a safety system for UR robots that makes it easy to protect your freely accessible robot application. The system reduces downtimes thanks to the reduction in speed of the robot according to the specific position of the worker, and the option of automatic restart. Thanks to the two nanoScan3 safety laser scanners, approaching persons are detected over a 360-degree range. Using the nanoScan3 Tool - URCap, the safety laser scanner can be configured quickly and easily directly via the teach pendant of the robot.
	sBot Speed PROFINET – ABB is a safety system for ABB robots (GoFaTM and SWIFTITM) that makes it easy to protect your freely accessible robot application in a PROFINET infrastructure. The system ensures a safe stop with automatic restart of the robot. The microScan3 Core - PROFINET safety laser scanner is used to detect an approaching person. The microScan3 Configuration Tool (software) can be used to quickly and easily configure the safety laser scanner.
	sBot Speed2 PROFINET – ABB is a safety system for ABB robots (GoFaTM and SWIFTITM) that makes it easy to protect your freely accessible robot application in a PROFINET infrastructure. The system ensures a safe stop with automatic restart of the robot. Thanks to the two microScan3 Core - PROFINET safety laser scanners, approaching persons are detected over a 360-degree range. The microScan3 Configuration Tool (software) can be used to quickly and easily configure the safety laser scanners.
	sBot Speed I/O – ABB is a safety system for ABB robots (GoFaTM and SWIFTITM) that makes it easy to protect your freely accessible robot application in an I/O infrastructure. The system ensures a safe stop with automatic restart of the robot. The microScan3 Pro I/O safety laser scanner is used to detect an approaching person. The microScan3 Configuration Tool (software) can be used to quickly and easily configure the safety laser scanner.

Safe Robotics Area Protection

	sBot Speed I/O – ABB is a safety system for ABB robots (GoFaTM and SWIFTITM) that makes it easy to protect your freely accessible robot application in an I/O infrastructure. The system ensures a safe stop with automatic restart of the robot. Thanks to the two microScan3 Pro I/O safety laser scanners, approaching persons are detected over a 360-degree range. The microScan3 Configuration Tool (software) can be used to quickly and easily configure the safety laser scanners. (depending on type)
Safety level	PL d

Product description

The Safe Robotics Area Protection safety systems from SICK are a starting point for safe human-robot interaction and enable cooperative and freely-accessible robot applications. The system comprises hardware as well as software or functional logic with tested safety functions. Not only generic but also manufacturer-specific variants are available, for example for Universal Robots, ABB, FANUC, KUKA and Yaskawa. Thanks to the detailed documentation and robot-specific settings, these variants can be easily integrated into robot control systems and, in part, configured directly via the robot hardware. Safe Robotics Area Protection ensures less downtime, optimized work processes and therefore an increase in productivity.

At a glance

- Comprising hardware as well as software or functional logic with tested safety functions
- Generic and manufacturer-specific variants (Universal Robots, ABB, FANUC, KUKA, Yaskawa)
- Documentation with wiring diagram, SISTEMA file and operating instructions
- Automated robot restart possible
- Performance level (PL) d

Your benefits

- Free, safe access to cooperative robot applications for less downtime, optimal work processes and high productivity
- Highly flexible and future-proof solution thanks to easy tailoring of the systems to the specific robot application and production environment
- Time-saving configuration of the systems, in part directly via the robot hardware
- Detailed documentation, compliant with relevant standards
- Low costs as the system is easy to integrate into industrial robot controllers, thanks to generic or manufacturer-specific variants for Universal Robots, ABB, FANUC, KUKA and Yaskawa

Fields of application

- Robot applications in all industries
- Loading, unloading and equipping of machines
- Mounting
- Packaging and pallet handling
- Drilling, screwing, gluing and polishing
- Inspection
- Injection molding

Ordering information

sBot Speed

Variant	Robot type	Robot restart	Safety controller included	Safety laser scanner included	Protective field range	Product type	Type	Part no.
sBot Speed	Generic	Automatic	Flexi Soft (CPU1)	–	–	Software	SOW/BOT-GNSP402010	1128764
				S300 Mini Remote	3 m	Hardware	SAPPB2D-08X0040	1093377
						System (hardware and software)	SYS/BOT-GNSP4020101S30	1126419
				microScan3 Core I/O	5.5 m	Hardware	SAPPB2D-08X0039	1093376
						System (hardware and software)	SYS/BOT-GNSP4020101MS3	1126420
sBot Speed – UR	–	Automatic	Flexi Soft	–	–	Software	SOW/BOT-URSP403010	1615124
	Universal Robots: UR3, UR5, UR10	Automatic	Flexi Soft	S300 Mini Remote	3 m	Hardware and software	SAPPB2D-08X0041	1096129
			Flexi Soft (CPU1)	S300 Mini Remote	3 m	System (hardware and software)	SYS/BOT-URSP4020101S31	1117270
			Flexi Soft (CPU3)	S300 Mini Remote	3 m	System (hardware and software)	SYS/BOT-URSP4020101S33	1117272
sBot Speed – URCap	Universal Robots: UR3e, UR5e, UR10e, UR16e, UR20 und UR30	Automatic	–	nanoScan3 Pro I/O	3 m	System (hardware and software)	SYS/BOT-URSP4ESUA01NS3	1111885
sBot Speed – URe	Universal Robots: UR3e, UR5e, UR10e, UR16e	Automatic or manual	–	–	–	Software	SOW/BOT-URE0402010	1614885
			Flexi Soft (CPU0)	nanoScan3 Pro I/O	3 m	System (hardware and software)	SYS/BOT-URE00420101NS3	1117267
							SYS/BOT-URE00420102NS3	1117268
			Flexi Soft (CPU3)	2 x nanoScan3 Pro I/O	3 m	System (hardware and software)	SYS/BOT-URE04020102N33	1121078

Safe Robotics Area Protection

Variant	Robot type	Robot restart	Safety controller included	Safety laser scanner included	Protective field range	Product type	Type	Part no.
sBot Speed – YA	Yaskawa: DX200, YRC1000, YR-C1000mi-cro	Automatic	Flexi Soft	–	–	Software	SAPPB2D-08XS006	1614202
				microScan3 Core I/O	5.5 m	Hardware	Hardware Kit	1106014
			Flexi Soft (CPU0)	microScan3 Core I/O	5.5 m	System (hardware and software)	SYS/BOT-YASP4020101MS3	1117273
				nanoScan3 Core I/O	3 m	System (hardware and software)	SYS/BOT-YASP4020101NS3	1117274
sBot Speed2 – URCap	Universal Robots: UR3e, UR5e, UR10e, UR16e, UR20 und UR30	Automatic	–	nanoScan3 Pro I/O	3 m	System (hardware and software)	SYS/BOT-URSP4ESUA02NS3	1137605

sBot Speed CIP

- **Note:** Hardware kit (part number: 1105347) and software (part number: 1614143 for FANUC or part number: 1614144 for KUKA) have to be ordered for the sBot Speed CIP.

Variant	Robot type	Safety controller included	Safety laser scanner included	Protective field range	Product type	Type	Part no.
sBot Speed CIP	FANUC: R-30iB Plus, KUKA: KR C4	Flexi Soft	microScan3 Core - EFI-pro	5.5 m	Hardware	Hardware Kit	1105347
sBot Speed CIP – FA	FANUC: R-30iB Plus	–	–	–	Software	SAPPC2D-08XS002	1614143
sBot Speed CIP – KU	KUKA: KR C4	–	–	–	Software	SAPPC2D-08XS004	1614144

sBot Stop

- **Variant:** sBot Stop
- **Robot type:** generic

Robot restart	Primary protective device (access control)	Secondary protective device (presence detection)	Type	Part no.
Automatic	Multiple light beam safety device deTem4 Core Number of beams: 4 Beam separation: 300 mm	Safety laser scanners S300 Mini Standard Protective field range: 3 m	SAPPB2D-08X0048	1097908
		Safety laser scanners microScan3 Core I/O Protective field range: 5.5 m	SAPPB2D-08X0050	1097911
	Safety light curtain deTec4 Core Protective field height: 1,500 mm Resolution: 30 mm	Safety laser scanners S300 Mini Standard Protective field range: 3 m	SAPPB2D-08X0047	1097907
		Safety laser scanners microScan3 Core I/O	SAPPB2D-08X0049	1097909

Robot restart	Primary protective device (access control)	Secondary protective device (presence detection)	Type	Part no.
		Protective field range: 5.5 m		
Manual	Multiple light beam safety device deTem4 Core Number of beams: 4 Beam separation: 300 mm	Safety laser scanners S300 Mini Standard Protective field range: 3 m	SAPPB2D-08X0044	1097904
		Safety laser scanners microScan3 Core I/O Protective field range: 5.5 m	SAPPB2D-08X0046	1097906
	Safety light curtain deTec4 Core Protective field height: 1,200 mm Resolution: 30 mm		SAPPB2D-08X0051	1098639
	Safety light curtain deTec4 Core Protective field height: 1,500 mm Resolution: 30 mm	Safety laser scanners S300 Mini Standard Protective field range: 3 m	SAPPB2D-08X0043	1097902
		Safety laser scanners microScan3 Core I/O Protective field range: 5.5 m	SAPPB2D-08X0045	1097905

sBot Stop – URCap

- **Variant:** sBot Stop – URCap
- **Robot type:** Universal Robots: UR3e, UR5e, UR10e, UR16e, UR20 und UR30

Items supplied	Robot restart	Opto-electronic protective devices	Type	Part no.
1 x nanoScan3 Core I/O safety laser scanner 1 x system plug 1 x mounting kit (with protection for optics cover) 1 x Ethernet cable, 5 m 1 x M12 connecting cable, 10 m, flying leads nanoScan3 Tool – URCap (configuration software) Operating instructions Quickstart guide Circuit diagram(macro for ePlan and PDF) SISTEMA file	Automatic	nanoScan3 Core I/O Protective field range: 3 m	SYS/BOT-URST4ESUA01NS3	1111884

sBot Stop2 – URCap

- **Variant:** sBot Stop2 – URCap
- **Robot type:** Universal Robots: UR3e, UR5e, UR10e, UR16e, UR20 und UR30

Items supplied	Robot restart	Opto-electronic protective devices	Type	Part no.
2 x nanoScan3 Core I/O safety laser scanner 2 x system plug 2 x mounting kit (with protection for optics cover) 2 x Ethernet cable, 5 m 2 x M12 connecting cable, 10 m, flying leads 1 x main module for Flexi Classic safety controller nanoScan3 Tool – URCap (configuration software)	Automatic	nanoScan3 Core I/O Protective field range: 3 m	SYS/BOT-URST4ESUA02NS3	1137604

Safe Robotics Area Protection

Items supplied	Robot restart	Opto-electronic protective devices	Type	Part no.
Operating instructions Quickstart guide Circuit diagram(macro for ePlan and PDF) SISTEMA file				

URCap Software

Variant	Robot type	Items supplied	Type	Part no.
sBot – URCap	Universal Robots: UR3e, UR5e, UR10e, UR16e, UR20 und UR30	Configuration tool software: nanoScan3 Tool – URCap and operating instructions for the sBot Stop – URCap and sBot Speed – URCap safety system, Quick Start Guide, connection diagram and SISTEMA file. The software only has to be purchased separately if the associated safety system hardware is already available.	SOW/BOT-URN34ESUA0	1115031

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

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