



Safety insights

The V300 Work Station
safety camera system

The V300 Work Station: new perspectives in the hazardous point protection

Assembly machines, inspection stations, automated handling machines – equipment into which the operator must reach in, cyclically or sporadically, is typically protected with a light curtain. Although proven and established, conventional technology has disadvantages that have yet to be resolved. The light curtain with the correct length must be selected from many different variants. The sender/receiver concept means that two components must be mounted and accurately aligned. The consequences: wasted time, personnel tied up, and the need to keep differing device variants in stock.

More compact? Fewer components? Simpler integration? More variable? The solution is just as simple as it is intelligent, and comes from SICK: the V300 Work Station.



The V300 WS – the reduction course for hazardous point protection

The V300 WS is a completely new sensor based on innovative camera technology, developed for monitoring hazardous points on typically rectangular action openings – with just one component, mounted in a corner of the safety area, saving space and in a protected location.

The “one sensor fits all sizes” concept puts an end to the numerous types – one variant covers the most diverse safety areas up to a maximum size of 1 m.





**SIMPLY SUPERIOR:
VISION TECHNOLOGY FROM SICK**

Vision systems are firmly established in quality assurance. SICK has carried over this technical approach to safety technology. To the benefit of solutions that are now much easier to adapt to customer-specific applications.

The new V300 WS has state-of-the-art camera technology. The optics used have a wide aperture angle; the invisible LED light beam in combination with the reflector ensures robust monitoring that is resistant to environmental factors. Without blind spots. All components and the evaluation unit are integrated in a single compact housing.

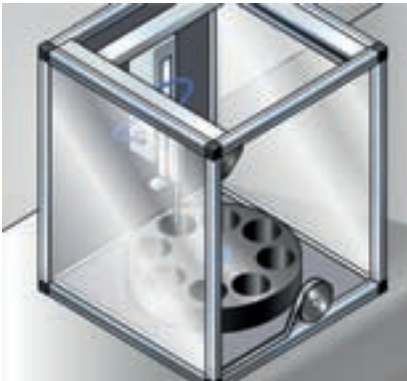


In the past: assembly machine with light curtain

Safe to say, quicker: the V300 Work Station – ready to go in a few minutes

No specialist knowledge, no configuration software: three simple steps suffice and the V300 WS is ready for operation. Its single-housing design eliminates the need for complicated co-ordination of the sender or receiver unit located opposite. There is also no need for time-consuming accurate alignment of the reflector strip – the sensor can handle tolerances of several centimetres along the optical axis.

1 >>>



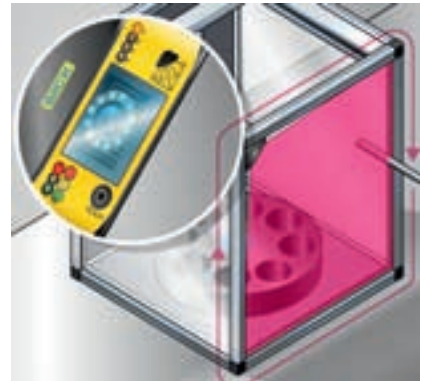
The sensor is mounted in a corner of the opening to be monitored, the adhesive reflector strip attached opposite to it.

2 >>>



Simply press the teach-in button to start the teach-in process. The sensor stores the location of the reflector strip – the area to be protected has been defined.

3 >>>



The test rod is passed along the reflector on the frame – the sensor is now ready for operation. Finished.

RAPID GAP-FREE SAFETY

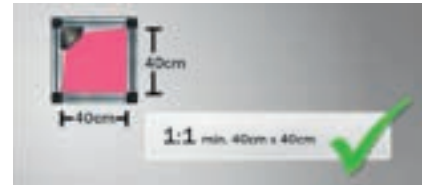
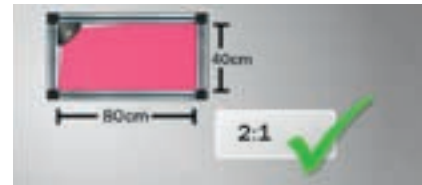
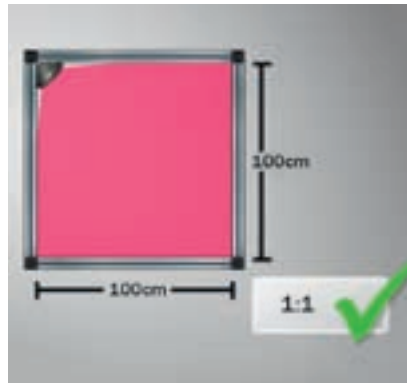
With a resolution of 20 mm, the sensor provides reliable hand protection. If someone reaches into the safety area, the sensor reacts within 20 ms – the process can be safely stopped.

The V300 WS is Type 3 (SIL2) and is thus a real substitute for Type 4 solutions which, because there is no alternative, are used in Cat 3 applications. The V200 WS is a convincing economical solution if only Type 2 is required.



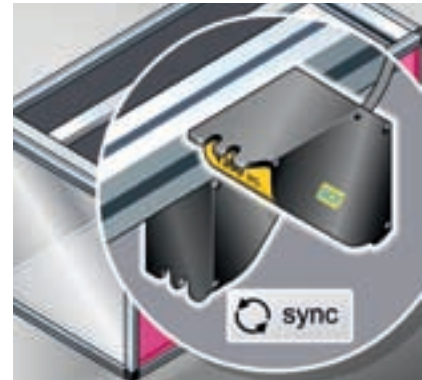
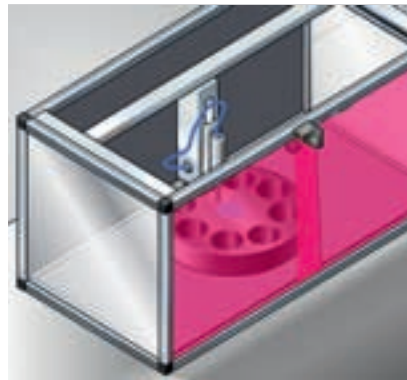
FLEXIBLE HANDLING

A single camera type monitors all openings as long as they have a maximum width of 1 m and do not exceed a maximum side ratio of 2:1 – eliminating the complicated and expensive stock-keeping of different sizes and types for differing openings.

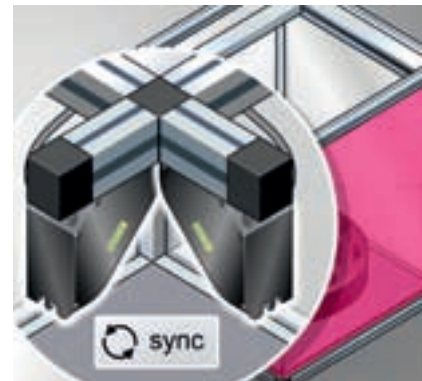


VERSATILE APPLICATION

A sensor pair can be located in the centre of the opening if larger action openings have to be monitored. The sensors are automatically synchronised and thus monitor openings of up to 2 m.

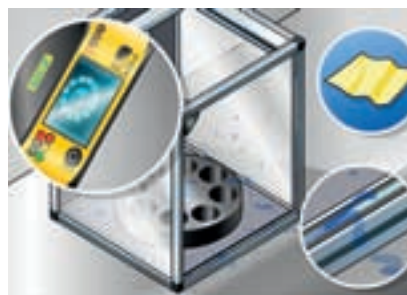


Particularly attractive: an “over-corner” mounting of two sensors. There is then no need for a central strut – making the workplace particularly ergonomic.



LOW-MAINTENANCE OPERATION

The V300 WS requires almost no maintenance at all during operation. If the reflector is dirty it can be cleaned or, if too dirty or damaged, it is simply replaced.



AREAS OF USE

- Electronics industry: placement machines, bonders, panel separators, lifters, assembly cells, etc.
- Robotics: pick&place stations, insertion stations, etc.
- Packaging industry: erectors, cartonisers, labelling machines, etc.
- Pharmaceuticals assembly of medical devices

More info? All the details, facts and data on the innovative V300 WS can be found at www.sick.com/v300

More progressive on principle: the V300 Work Station sets environmental standards

SICK takes its environmental responsibility seriously. The careful use of natural resources was a declared aim during the development of the V300 WS.

Result: 70 % less energy consumption during operation. Innovative production and the integrated design has resulted in a reduction of about 80 % in the use of raw materials, etc. The V300 WS requires, for example, up to 90 % less aluminium, whose production requires a particularly large amount of energy. Of course, the V300 WS is ROHS-compliant, i.e. it contains no poisonous materials such as lead.

Environmental advantages that also pay economically: while the energy consumption of conventional technology is typically > 13 W, the V300 WS is considerably more economical with < 4 W. There are also weight savings: a pair of conventional sensors weighs from 2 kg upwards, while a V300 WS is only about 355 g.

Technical data and ordering information

Technische Daten	
Protection class (DIN EN 50178)	III
Enclosure rating (IEC 60529)	IP 54
Resolution	20 mm
Response time	20 ms
Switching outputs	2 x 250 mA
Supply voltage V_s on device	24 V DC / $\pm 5\%$
Category acc. to EN 954-1	V200 WS: 2; V300 WS: 3
Type acc. to IEC 61496-1 and IEC/TR 61496-4	V200 WS: 2, V300 WS: 3
SIL acc. to IEC 61508 and IEC 62061, PL acc. to ISO 12 849 1:2006	V200 WS: 1, PLc V300: 2, PLd
Dimensions, housing	ca. 90 x 90 x 50 mm ³ (L x B x H)

Article	Description	Part no.
V200 WS	Camera system, Type 2	1042027
V300 WS	Camera system, Type 3	1041542
Each including	Reflector strip, standard 2 m	4050800
	Test rod	2043725
	Teach-in pin	4052939
	Mini-CD-ROM with operating instructions	2044268
Accessories (selection)	Description	Part no.
Reflector strip	Heavy-duty design, 2 m	4053220
Connection technology	M12 socket, 8-pin, straight, with 2.5 m cable	6020537
	M12 socket, 8-pin, straight, with 5.0 m cable	6020354
	M12 socket, 8-pin, straight, with 7.5 m cable	6020353

safetyPLUS® – the plus
for performance and service



Services that save time and cut costs

If desired, SICK experts advise on and support the use of each safety technology from the initial idea to regular maintenance. Consequently, the range of services available comprises everything from works visits, through the risk assessment, and up to the CE conformity assessment. SICK provides support during commissioning, carries out stoptime measurements and offers a wide-ranging training programme. SICK services cover all phases of the machine life cycle.

Safety from the number one

SICK is the world's leading producer of industrial safety systems. SICK offers integrated system solutions based on a unique mix of competence, products and services. Users profit from the high safety quality of standard- and directive-compliant machines and plant: safety solutions from SICK increase the security of investments and open up new savings potentials through more efficient processes, while always keeping the primary aim in view – the protection of humans and machines.

Unique variety and fundamental simplicity: the range of products

Intelligent protective equipment is indispensable for automated production and logistics processes. It's good that SICK has a complete programme of innovative products here. And the safe controller solution sens:Control ensures optimum integration of the sensors. SICK places great value on technology that is as easy as possible to use. Trouble-free commissioning is just as much a part of this as simple integration in the automation environment.



FACTORY AUTOMATION

With its intelligent sensors, safety systems, and auto idet applications, SICK realises comprehensive solutions for factory automation.

- Non-contact detecting, counting, classifying, and positioning of any types of object
- Accident protection and personal safety using sensors, as well as safety software and services



LOGISTICS AUTOMATION

Sensors made by SICK form the basis for automating material flows and the optimisation of sorting and warehousing processes.

- Automated identification with bar code and RFID reading devices for the purpose of sorting and target control in industrial material flow
- Detecting volume, position, and contours of objects and surroundings with laser measurement systems



PROCESS AUTOMATION

Analyzers and Process Instrumentation by SICK MAIHAK provides for the best possible acquisition of environmental and process data.

- Complete systems solutions for gas analysis, dust measurement, flow rate measurement, water analysis or, respectively, liquid analysis, and level measurement as well as other tasks



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- España
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- Italia
- Japan

- Nederlands
- Norge
- Österreich
- Polska
- Republic of Korea
- Republika Slovenija
- România
- Russia
- Schweiz
- Singapore
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Please find detailed addresses and additional representatives and agencies in all major industrial nations at www.sick.com

Handed over by:

