SOLUTIONS FOR
THE ELECTRONICS INDUSTRY

The electronics industry is a driving force of industrial progress and is greatly impacted by the pressure of the market.

It must innovate – quickly, reliably and economically – while maintaining the lowest possible error rates. High-tech machines and production sites need to be equipped with state-of-the-art sensors to satisfy market requirements for quality and cost-effectiveness.

Full of videos, articles, and products this e-Book has the information needed to solve some of the biggest & most common problems in the electronics industry.

SICK
Sensor Intelligence.

THE ELECTRONICS INDUSTRY
LEADERS IN INNOVATION

High-tech electronics are at the forefront of industrial progress yet face the most difficult market pressures. They must lead innovation and time to market, leaving little room for error.

Manufacturers must take advantage of a tight window of opportunity for their product ideas with rapid, reliable, and economical production. Machines and production plants with the state-of-the-art technologies must be equipped with the most advanced sensors to achieve the quality and profitability the market demands.

VIDEO ▶

Can You Keep Pace With The Rapid Development of The Electronics Industry?

W2 SENSOR
FLEXIBLE AUTOMATION

The first photoelectric proximity sensor with linear light spot in an ultra-compact housing supports a wide variety of solutions. The linear light spot combines maximum precision and a highly repeatable switching point to ensure that the switching signal is constant throughout the processing time of an object, even if gaps, grooves, or openings are present.

Switching errors in the detection of PCBs due to recesses or reflective surfaces can cause costly faults in the production process. The W2 ultra-compact photoelectric proximity sensor with linear light spot overcomes these challenges even in the smallest of spaces.

Precise Background Suppression for Steady Detection and Flexible Application

VIDEO ▶

PRINTED CIRCUIT BOARD DETECTION
FLEXIBLE AUTOMATION

Nearly every electronic device contains one or more Printed Circuit Board. During manufacturing, the PCB goes through several process steps before it is added to the electronic device during assembly. To ensure the highest production yield and fewer rejects, integrated sensor technology automatically detects the PCBs and verifies their position prior to each surface mount technology's (SMT) addition of different components to the board.

Some common challenges for consistent reliable detection include:

- Distinguishing colored & reflective components
- Frequent PCB design changes
- Restrictive working space for standard detection components
- Confusing work environment for normal sensors

These challenges, if not addressed, lead to a slower production and false trips and preventable errors.
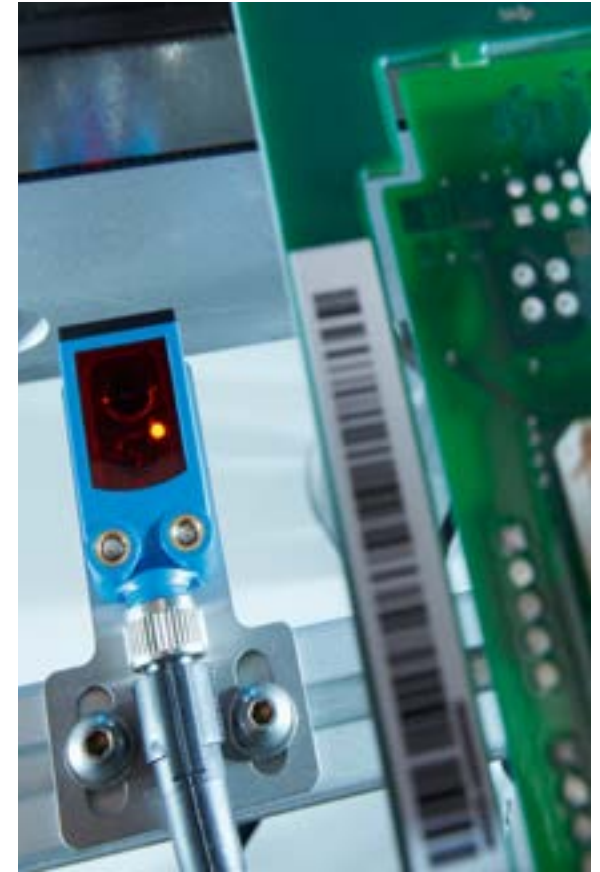
APPLICATION NOTE DOWNLOAD
Easily Solve Common
PCB Detection Challenges
With Sensor Technology

LECTOR 620s
TRACK & TRACE

The Lector620 image-based code reader identifies the printed circuit board depending on the 1D or 2D codes applied. The Lector620 can read both types of codes in both directions due to its extremely compact housing design. The integrated laser aiming line makes it particularly user-friendly.

The codes on the PCB's are getting smaller, and with high speed of movement there is a need for a quick response and accurate decoding from the barcode reading solution. The Lector 620 can be relied upon to read these smaller codes while the PCBs are on the move. In the case of short read times and small codes with a resolution of only 0.15 mm, the camera-based code reader delivers read rates exceeding 99 percent – even if the code and contrast quality of the miniature label is poor.

VIDEO ▶

10,000
THE NUMBER OF PCB CODES A LECTOR620 READS IN A DAY

Reliably Detect Codes & Increase Productivity with Lector620

OMNI PORTAL SYSTEM
TRACK & TRACE

Omni-directional OPS (omni portal systems) ensures track and trace at high throughput rates using multiple mounted high-performance scanners with deticated controllers to identifying 1D bar codes on electronics. The OPS is technically optimized overall system enable the implementation of an optimum configuration and thus minimize manual interruptions in the process.

The modular bar code reading system can adapt to your application. This technologically optimized complete system for identifying and reading bar codes on goods and products is a flexible high-end solution – and always features the latest generation of scanners for a high read rate even at high throughput rates.

6

Number of sides the OPS can reliably read at once

See All Sides of Track & Trace with the OPS

TRISPECTOR
QUALITY CONTROL

The TriSpector1000 is a stand-alone configurable sensor for cost-efficient 3D inspections. No matter what the shape, color or orientation of the product, the sensor is up to the challenge. Now content, completeness and emptiness can be verified in all dimensions.

In the electronics industry, the TriSpector100 is used often for reliable detection of 3D elements. For example, verifying the presence or absence of components on circuit boards, verifying pins in connectors, and detecting the presence and positioning of batteries. The TriSpector proves to be a cost effective inspection tool.

VIDEO ▶

Increase Flexibility in Your Application and Detect More With The TriSpector1000

OD5000
QUALITY CONTROL

The OD5000 displacement measurement sensor specializes in high-precision measuring tasks, offering solutions in a wide range of applications. With a measuring frequency of up to 80kHz, the OD5000 also measures quick and rotating measuring objects with µm-precision. The innovative analysis algorithm allows stable measurements with the highest level of repeatability on a wide range of surfaces.

In the electronics industry, the OD5000 prevents correction errors while measuring device assemblies to make sure they are in the correct postion. The OD5000 helps check if the displays are correctly insalled in smartphones with micrometer-level accuracy.
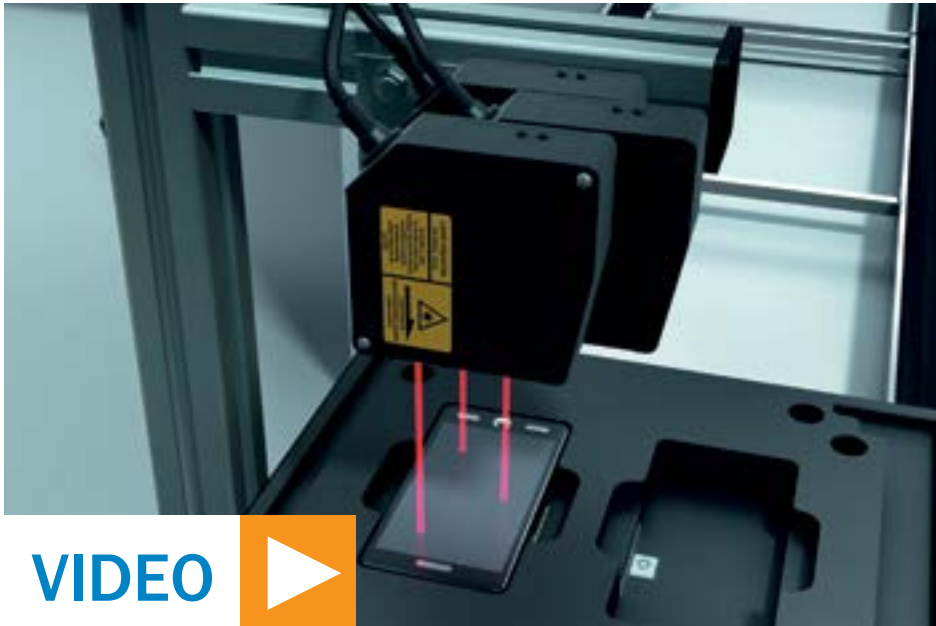
VIDEO ▶

WHITEPAPER DOWNLOAD
Non-contact Measurement with Displacement Measuring Sensor for Quality Inspection

SAFETY SOLUTIONS

miniTwin Light Curtain

Small electronic products assembly machines require sensor systems that are equally compact. The miniTwin safety light curtain has the world's smallest design, making it the perfect solution for such applications. The sender & receiver areh oused in a single stick, reducing the number of components, and built-in alignment LEDs aid in installation & setup. Combined with the FlexiSoft safety controller, a perfect safety solution is created.

**Light Curtain or Safety Laser Scanner?
How to Choose an Optical Safety Device**

Flexi Soft Safety Controls

For some assembly machines, operators must intervene to introduce material or correct a problem. The Flexi Soft safety controller can monitor each tool independently, allowing adjacent machines to continue working. The safe signals from the individual machines can be connected using the Flexi Line expansion concept and cascaded or diagnosed with the Flexi Loop safe sensor cascade.

VIDEO ▶

**Safety Always Within Your Control:
Flexi Soft Safety Controller**

SERVICES BY SICK

SICK LifeTime Services is a comprehensive set of high-quality services provided to support the entire life cycle of products and applications from system design all the way to upgrades. These services increase the safety of people, boost the productivity of machines and serve as the basis for our customers' sustainable business success.

LifeTime Services range from product-independent consulting to traditional product services and are characterized by extensive industry expertise and more than 60 years of experience.

CLICK on one of the five SICK Services categories to learn more:

Training & Education

Verification & Optimization

Consulting & Design

Upgrade & Retrofits

Product & System Support

Phone-in Technical Support & Customer Care

8 AM - 5 PM CT
Call **1-800-325-7425** and follow the prompts

For emergency and critical care calls outside of normal business hours, call **1-800-325-7425** and follow the prompts. You will be connected to a call center where your information will be forwarded to the appropriate department for follow up on a next available basis.

WE HOPE YOU ENJOYED OUR ELECTRONICS E-BOOK AND FOUND THE WIDE RANGE OF CONTENT USEFUL.

Whether you work for a company that does PCB production, or production of electronic devices, SICK is there with solutions. From from chip production to complex assembly and inspection processes for computers, smart phones, tablets and other touchscreen devices, SICK sensor technology has proven itself in all areas of the electronics industry.

SICK is one of the world's leading manufacturers of sensors and sensor solutions for industrial applications. Its safety solutions and services are used by the world's leading manufacturers across all major industries. SICK's safety standards expertise, application knowledge, and services are unsurpassed. With more than six decades of experience in every corner of the world, no one is better suited to help you with comprehensive and cost-effective safety than SICK.

To learn more about the many electronics solutions from SICK, please email us at info@sick.com.