SICK.COM

PRODUCT OVERVIEW

CSS/CSX High Speed

Color sensors

SICK Sensor Intelligence

COLOR SENSORS

CSS/CSX High Speed

Detects 24 stored colors quickly and offers precise adjustments

The CSS/CSX High Speed color sensor is characterized by its high switching frequency and its precise, infinitely variable sensitivity adjustment. Furthermore, the sensor outputs color values (L*a*b or RGB) as well as the similarity of a detected color to a taught-in color. Thanks to its innovative teach-in procedure, the CSS/CSX High Speed also detects color gradients and structured materials. The switching outputs of the device can be binary coded in “Coded” mode without interfaces, which enables it to output up to 15 colors. Up to 24 colors per identification task (job) can even be transferred via the IO-Link interface and saved externally. The sensor can be quickly and precisely configured for the specific application using the setup assistant in the SOPAS software.

CSS/CSX High Speed AT A GLANCE

BENEFITS

- Thanks to the fast object color detection, high process speeds can be achieved thereby increasing productivity
- The output of up to 15 colors per binary coding of the switching outputs ensures easy data transmission - without interfaces such as IO-Link or Modbus®
- Extends the process monitoring and diagnostics options through the output of color values and color similarity
- Using IO-Link, up to 24 colors can be saved per identification task (job). This saves resources and increases the process flexibility
- The sensor can be quickly configured correctly using the setup assistant in the SOPAS software. This makes commissioning easier and increases the process stability.

FEATURES

- Switching frequency: 13.8 kHz
- Output of color values (L*a*b or RGB) and color similarity
- Output of up to 15 colors using the “Coded” mode
- Up to 24 colors per identification task (job) can be saved
- IO-Link interfaces; SOPAS software with application-specific setup assistant
- CSX: installation-compatible to CS8

TECHNICAL DATA OVERVIEW

Sensing distance	13 mm 60 mm
Light spot size	2 mm 4 mm Ø 12 mm
Adjustment	Single value teach-in Multi value teach-in
Connection type	Male connector

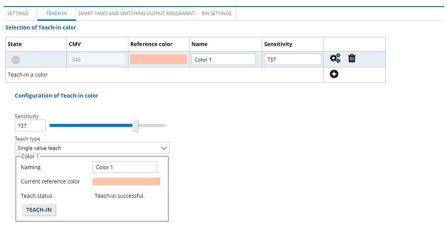
ADVANTAGES

Quick detection of color gradients as well as precise sensitivity adjustment

With a switching frequency of 13.8 kHz, CSS/CSX High Speed color sensors are very well suited to fast processes. Thanks to the innovative teach-in procedure, even color gradients and structured materials are no problem for the sensors. Their sensitivity can also be precisely adjusted.

Quick color detection
Very well suited to sorting tasks at high speeds and fast detection of color markings.

(Natural) color mixtures
The CSS/CSX High Speed devices reliably distinguish even between textiles and natural materials such as wood, stone and leather.



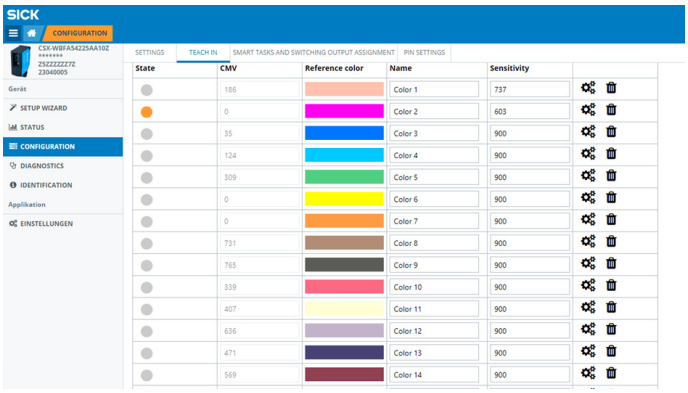
999 sensitivity levels
The switching tolerances of the color sensor can be adjusted with process accuracy. This is ensured by its 999 sensitivity levels.

→ Quick detection of structured materials and switching tolerances that can be adjusted with process accuracy

Outputs up to 15 colors, or even up to 24 with IO-Link interface

The four switching outputs of the 8-pin variants are binary coded in “Coded” mode and therefore enable output of up to 15 colors – directly at the sensor. IO-Link opens up even more options: Up to 24 colors can be stored in one job.

Output of 15 colors without interface
In “Coded” mode, up to 15 colors can be output through binary coding of the switching outputs.

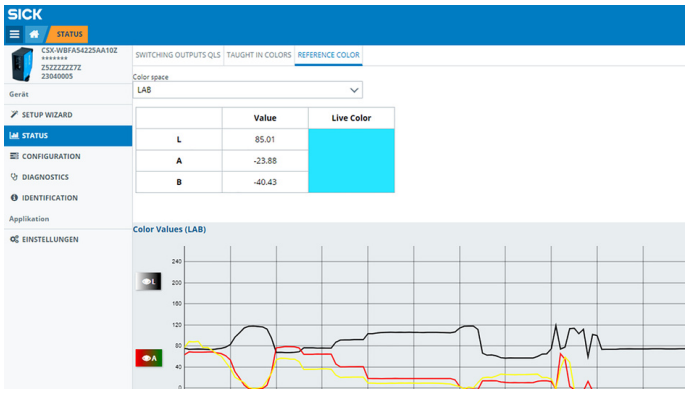


Display of 24 colors with IO-Link interface
Up to 24 colors can be transmitted simultaneously via the IO-Link interface and saved externally.

⟶ Detect and sort up to 24 colors in one process – with just one sensor

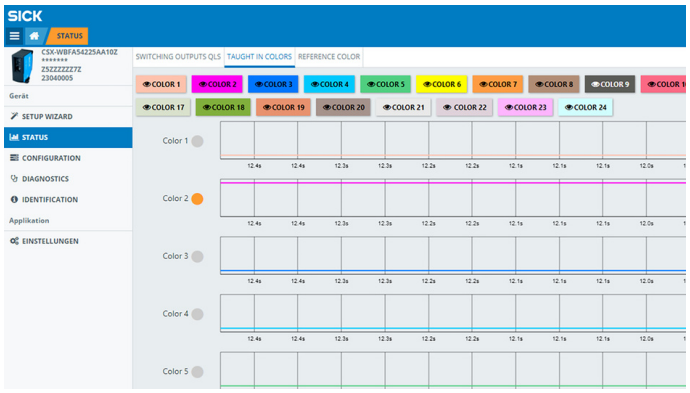
Display of color similarity and output of color values

The CSS/CSX High Speed shows the difference between the taught-in color and the detected color on its display. Color values (RGB or L*a*b) can also be transmitted and stored via IO-Link.



RGB and L*a*b output

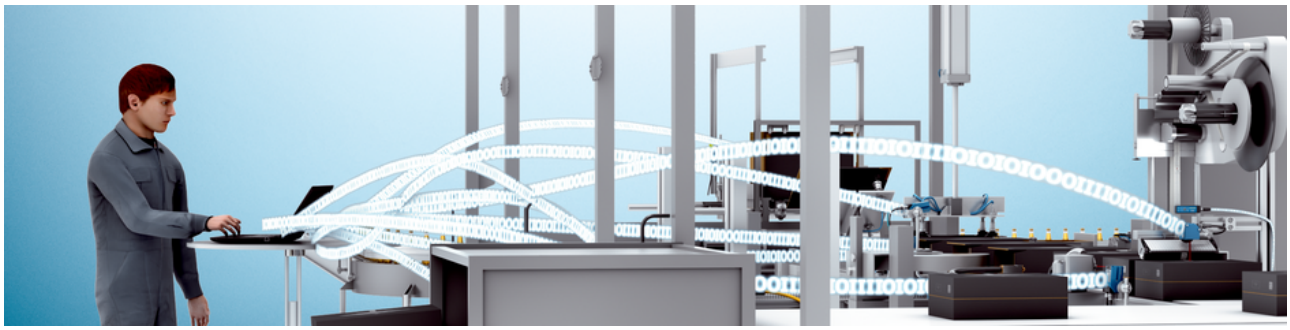
In addition to storing and transmitting RGB color values, the CSS/CSX High Speed features another color space with L*a*b.



Captures color similarity

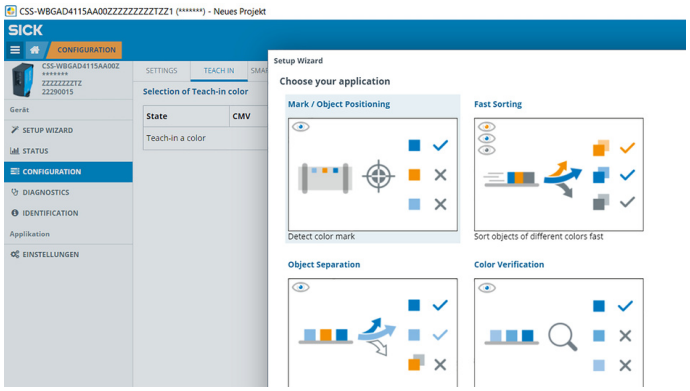
The sensor determines the similarity between the taught-in and detected color, from a complete match (999) to a complete contrast of color values (000).

→ The CSS/CSX High Speed devices show the difference between taught-in color and detected color – color values can also be transmitted and stored via IO-Link

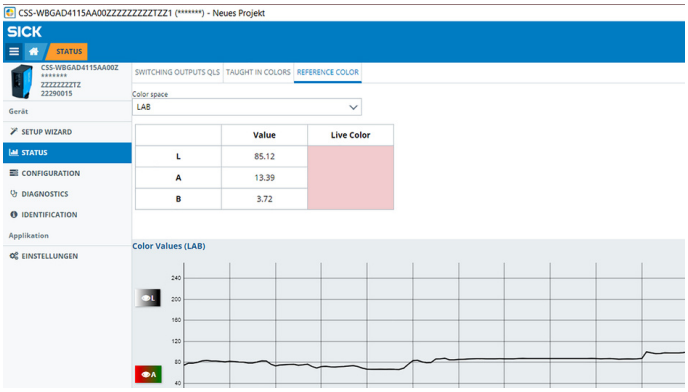


More options thanks to IO-Link

Thanks to the smart setup assistant in the SOPAS software, the color sensor is especially quick to install. The simple diagnostics, monitoring and adjustment of the CSS/CSX High Speed during operation also improves efficiency.



Fast commissioning
Using the setup assistant in the SOPAS interface, the CSS/CSX can be quickly and precisely configured for the specific application.



Intelligent real-time monitoring
Continuous monitoring in real time, fast diagnostics, and lots of process data thanks to IO-Link.

→ Thanks to its many intelligent tools, the CSS/CSX High Speed color sensor saves valuable resources and increases system productivity through predictive maintenance.

Select the right product variant and accessories directly online. There you will also find example applications as well as downloads such as CAD dimensional models, operating instructions and software.
www.sick.com/CSS_CSX_High_Speed

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnership with our customers is more than just a promise: Together, we optimize productivity, elevate quality, protect health and safety, and sustain the future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions.

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