



# KT8

Laser contrast sensor and CAN communication

CONTRAST SENSORS

**SICK**  
Sensor Intelligence.



### Technical data overview

|                               |   |
|-------------------------------|---|
| <b>Dimensions (W x H x D)</b> | 30.4 mm x 53 mm x 80 mm                               |
| <b>Sensing distance</b>       | 150 mm <sup>1)</sup>                                  |
| <b>Type of light</b>          | Laser <sup>2)</sup><br>Red                            |
| <b>Light spot size</b>        | Ø 0.3 mm <sup>3)</sup><br>Ø 3 mm <sup>3)</sup>        |
| <b>Switching frequency</b>    | 17 kHz <sup>4)</sup>                                  |
| <b>Response time</b>          | 30 µs <sup>5)</sup>                                   |
| <b>Switching output</b>       | NPN<br>PNP (depending on type)                        |
| <b>Adjustment</b>             | Static 2-point teach-in<br>Dynamic teach-in (min/max) |
| <b>Connection type</b>        | Male connector M12, 5-pin                             |

- <sup>1)</sup> From front edge of lens.
- <sup>2)</sup> Average service life: 50,000 h at T<sub>U</sub> = +25 °C.
- <sup>3)</sup> At focal point = sensing distance 150 mm.
- <sup>4)</sup> With light/dark ratio 1:1.
- <sup>5)</sup> Signal transit time with resistive load.

### Product description

The KT8 sensor family has two variants. The first, KT8L, supports extremely reliable detection of the smallest contrast marks and objects thanks to its precise laser. Lasers are used in contrast sensors for long sensing distances (up to 800 mm) or to detect very small objects. The KT8L supports both. Two light spot sizes are available: <0.3 mm for detecting the smallest objects and 3 mm for larger objects and marks. The second variant, KT8 CAN, is characterized primarily by its ability to communicate. This enables users to adjust the sensor to meet their specific requirements and easily integrate additional functions into their machines. Virtually any number of parameter sets (i.e., taught-in sensor settings) can be stored in the machine controller via the CAN interface, e.g., for different packaging or prints. In addition, important process data such as contamination or current switching thresholds can be queried via the CAN interface. This product is topped off by a 3-color LED, gloss adaptation, automatic drift correction, and fast response times.

### At a glance

- Laser version offers sensing distances of 30 mm to 800 mm
- Very small and precise laser light spot (Class II)
- Fast switching frequency of 17 kHz
- Detection reliability displayed in the bar graph display
- CAN interface version for parameter setup, diagnostics and function selection
- Very precise light spot

### Your benefits

- Wide selection of varying distances, depending on the application
- Precise detection of the smallest marks and objects, e.g., 1 x 1 mm<sup>2</sup>
- Reliable operation, even with unsteady objects
- Easy integration into machine designs, thanks to standard CAN protocol
- Access to the sensor via the control system saves the machine operator time and effort during configuration
- Individual, application-specific configuration and settings
- Automatic drift correction ensures high production reliability with faded print marks and other difficult to detect marks
- Reliable operation, even with high-gloss reflective surfaces, increasing throughput

## Ordering information

Other models and accessories → [www.sick.com/KT8](http://www.sick.com/KT8)

- **Adjustment:** Teach-in button
- **Teach-in mode:** Static 2-point teach-in, Dynamic teach-in (min/max)
- **Light source:** laser, Red (Average service life: 50,000 h at  $T_U = +25$  °C.)

| Sensing distance | Operating distance                | Switching output | Light spot size        | Connection type Detail       | Light emission          | Type       | Part no. |
|------------------|-----------------------------------|------------------|------------------------|------------------------------|-------------------------|------------|----------|
| ≤ 150 mm         | 30 mm ...<br>600 mm <sup>1)</sup> | NPN              | ∅ 3 mm <sup>2)</sup>   | Male connector<br>M12, 5-pin | Long side<br>of housing | KT8L-N3756 | 1041352  |
|                  |                                   | PNP              | ∅ 3 mm <sup>2)</sup>   | Male connector<br>M12, 5-pin | Long side<br>of housing | KT8L-P3756 | 1041351  |
|                  | 30 mm ...<br>800 mm <sup>1)</sup> | NPN              | ∅ 0.3 mm <sup>2)</sup> | Male connector<br>M12, 5-pin | Long side<br>of housing | KT8L-N3656 | 1041263  |
|                  |                                   | PNP              | ∅ 0.3 mm <sup>2)</sup> | Male connector<br>M12, 5-pin | Long side<br>of housing | KT8L-P3656 | 1041262  |

<sup>1)</sup> With respect to black-white contrast 6 % / 90 %.

<sup>2)</sup> At focal point = sensing distance 150 mm.

## 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.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)