





Illustration may differ



### Ordering information

| Type               | part no. |
|--------------------|----------|
| KTS-WN61141142ZZZZ | 1130332  |

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

### Detailed technical data

#### Features

|                                   |   |
|-----------------------------------|---|
| <b>Parameter presettings</b>      | Key lock active, initially only teach-in possible |
| <b>Special applications</b>       | Color test  |
| <b>Device type</b>                | Core Color  |
| <b>Housing design</b>             | Middle  |
| <b>Dimensions (W x H x D)</b>     | 26 mm x 62 mm x 47.5 mm                           |
| <b>Light source</b>               | LED, RGB <sup>1)</sup>                            |
| <b>Light emission</b>             | Long side of housing                              |
| <b>Light spot size</b>            | 1.2 mm x 3.9 mm                                   |
| <b>Light spot direction</b>       | Vertical <sup>2)</sup>                            |
| <b>Receiving filters</b>          | None  |
| <b>Wave length</b>                | 470 nm, 525 nm, 625 nm                            |
| <b>Sensing distance</b>           | ≤ 13 mm   |
| <b>Sensing distance tolerance</b> | ± 3 mm  |
| <b>Teach-in mode</b>              | 1-point teach-in, 2-point teach-in                |
| <b>Output function</b>            | Light/dark switching                              |
| <b>Delay time</b>                 | Adjustable  |
| <b>Special features</b>           | Complete access to all functions after unlocking  |
| <b>Setting the key lock</b>       | Standard Teach-in                                 |
| <b>Delivery status</b>            | 2-point teach-in                                  |
| <b>Safety-related parameters</b>  |   |
|                                   | MTTF <sub>D</sub> 291 years                       |

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

<sup>2)</sup> In relation to long side of housing.

## Electronics

|  |   |
|--|---|
| <b>Supply voltage</b>                      | 10.8 V DC ... 28.8 V DC <sup>1)</sup>   |
| <b>Ripple</b>                              | $\leq 5 V_{pp}$ <sup>2)</sup>   |
| <b>Current consumption</b>                 | $< 100 \text{ mA}$ <sup>3)</sup>  |
| <b>Switching frequency</b>                 | 12.5 kHz <sup>4) 5)</sup>   |
| <b>Response time</b>                       | 40 $\mu\text{s}$  |
| <b>Jitter</b>                              | 20 $\mu\text{s}$ <sup>6)</sup>  |
| <b>Switching output</b>                    | NPN   |
| <b>Switching output (voltage)</b>          | NPN: HIGH = $V_S$ / LOW $\leq 3 \text{ V}$  |
| <b>Output current <math>I_{max}</math></b> | 100 mA <sup>7)</sup>  |
| <b>Retention time (ET)</b>                 | 25 ms, non-volatile memory  |
| <b>Time delay</b>                          | None  |
| <b>Protection class</b>                    | III   |
| <b>Circuit protection</b>                  | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| <b>Connection type</b>                     | Male connector M12, 4-pin   |

<sup>1)</sup> Limit values: DC 12 V (-10 %) ... DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A.

<sup>2)</sup> May not fall below or exceed  $U_V$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> 1-point teach-in (color mode): 4 kHz.

<sup>6)</sup> 1-point teach-in (color mode): 60  $\mu\text{s}$ .

<sup>7)</sup> Total current of all Outputs.

## Mechanics

|                         |         |
|-------------------------|---------|
| <b>Housing material</b> | VISTAL® |
| <b>Optics material</b>  | COP     |
| <b>Weight</b>           | 68 g    |

## Ambient data

|                                      |  |
|--------------------------------------|--|
| <b>Ambient operating temperature</b> | -20 °C ... +60 °C                        |
| <b>Ambient temperature, storage</b>  | -25 °C ... +75 °C                        |
| <b>Shock load</b>                    | According to IEC 60068-2-27 (30 g/11 ms) |
| <b>Enclosure rating</b>              | IP67                                     |
| <b>UL File No.</b>                   | E181493                                  |

## Certificates

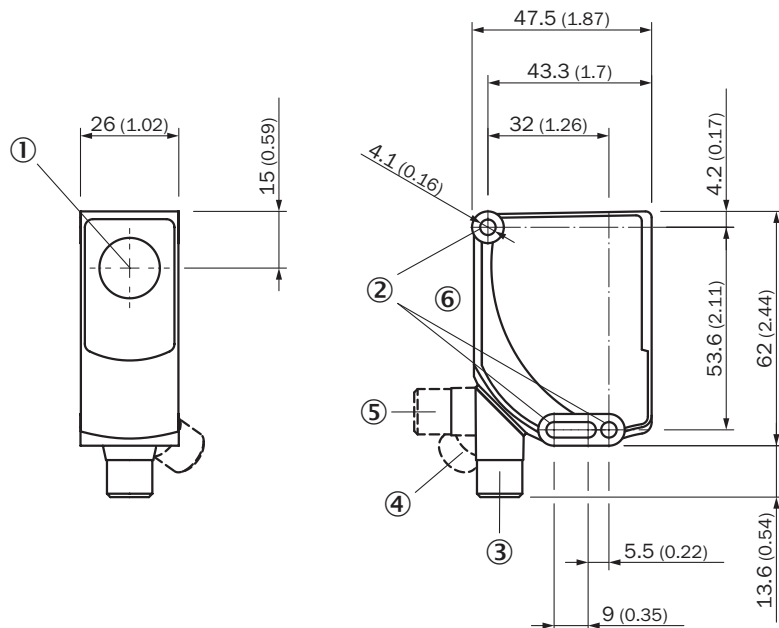
|   |   |
|---|---|
| <b>EU declaration of conformity</b>       | ✓ |
| <b>UK declaration of conformity</b>       | ✓ |
| <b>ACMA declaration of conformity</b>     | ✓ |
| <b>Moroccan declaration of conformity</b> | ✓ |
| <b>China RoHS</b>                         | ✓ |
| <b>cULus certificate</b>                  | ✓ |

|  |   |
|--|---|
| <b>Photobiological safety (IEC EN 62471)</b> | ✓ |
|--|---|

### Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270906 |
| <b>ECLASS 5.1.4</b>   | 27270906 |
| <b>ECLASS 6.0</b>     | 27270906 |
| <b>ECLASS 6.2</b>     | 27270906 |
| <b>ECLASS 7.0</b>     | 27270906 |
| <b>ECLASS 8.0</b>     | 27270906 |
| <b>ECLASS 8.1</b>     | 27270906 |
| <b>ECLASS 9.0</b>     | 27270906 |
| <b>ECLASS 10.0</b>    | 27270906 |
| <b>ECLASS 11.0</b>    | 27270906 |
| <b>ECLASS 12.0</b>    | 27270906 |
| <b>ETIM 5.0</b>       | EC001820 |
| <b>ETIM 6.0</b>       | EC001820 |
| <b>ETIM 7.0</b>       | EC001820 |
| <b>ETIM 8.0</b>       | EC001820 |
| <b>UNSPSC 16.0901</b> | 39121528 |

### Dimensional drawing

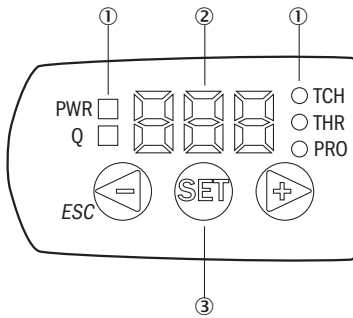


Dimensions in mm (inch)

- ① Optical axis
- ② fixing hole
- ③ M12 male connector, delivery state
- ④ M12 male connector, end stop right
- ⑤ M12 male connector, end stop left

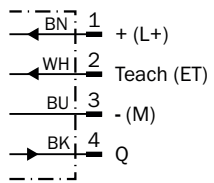
⑥ display and adjustment elements

display and adjustment elements



- ① LED status indicator
- ② Display
- ③ Navigation buttons

Connection diagram Cd-380



### KTS/KTX Prime - Setting the switching threshold (teach-in dynamic)

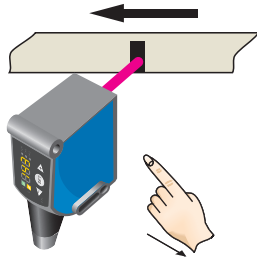
Suitable for teaching in moving objects.

#### 1. Position background

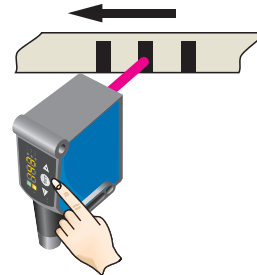


Press the Set pushbutton to start the teach-in process.

#### 2. Move at least the mark and background using the light spot

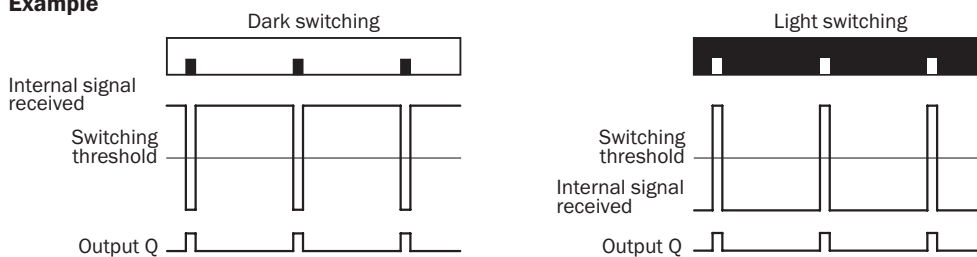


The display lights up during repeat length detection (---).



Press the Set pushbutton to end the teach-in process. The Quality of Teach is displayed.

#### Example



#### Switching characteristics

The optimum emitted light is selected automatically (at RGB variants).

Static teach-in: light/dark setting is defined using teach-in sequence.

Dynamic teach-in: switching output active on mark, if background is longer in the field of view during the teach-in. The switching threshold is set in the center between the background and the mark.

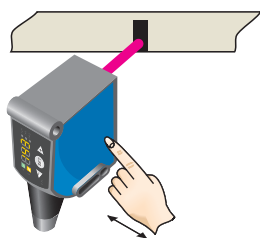
Keylock (activation and deactivation): Press and hold the “+” pushbutton > 10 s.

The Q-LED (yellow) flashes and the “Err” error message appears on the display.

### KTS/KTX Prime - setting the switching threshold (2-point teach-in)

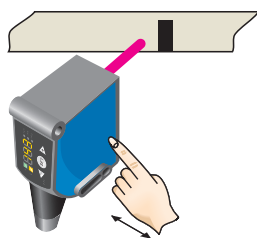
Suitable for manual positioning of the object to be detected, e.g. marks and background.

#### 1. Position mark



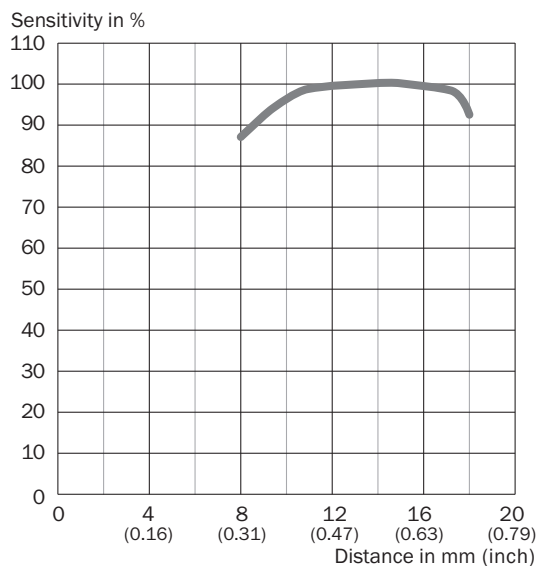
When setting the contrasts to be detected, "1st" flashes. Press set button.

#### 2. Position background






When setting the contrasts to be detected, "2nd" flashes. Press set button. The Quality of Teach is displayed.

### Sensing distance Sensing distance 13 mm, light spot direction horizontal/vertical



### Recommended accessories

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

|   | Brief description   | Type               | part no. |
|---|---|--------------------|----------|
| <b>Mounting systems</b>   |   |                    |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Plate K for universal clamp bracket</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated</li> <li><b>Items supplied:</b> Universal clamp (2022726), mounting hardware</li> <li><b>Usable for:</b> W11-2, W12-3, W14-2, W18-3, W23-2, W24-2, W27-3, W30, W32, W34, W36, PL50A, PL80A, P250, UC12, LUT3, KT2, KT5-2, KT8, CS8, DT2, DS30, DS40, W12-2 Laser, W16, W26, KT5</li> </ul> | BEF-KHS-K01        | 2022718  |
| <b>connectors and cables</b>  |   |                    |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Unshielded</li> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>  | STE-1204-G         | 6009932  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 4-wire, PVC</li> <li><b>Application:</b> Uncontaminated zones, Zones with chemicals</li> </ul>   | YF2A14-050VB3XLEAX | 2096235  |

## SICK AT A GLANCE

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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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