



**KTX-WS41142242ZZZZ**

KTX

CONTRAST SENSORS

**SICK**  
Sensor Intelligence.



## Ordering information

Type	part no.
KTX-WS41142242ZZZZ	1137289

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

Illustration may differ



## Detailed technical data

## Features

<b>Special applications</b>	Standard
<b>Device type</b>	Easy Teach
<b>Dimensions (W x H x D)</b>	30 mm x 53 mm x 78.5 mm
<b>Sensing distance</b>	≤ 13 mm
<b>Sensing distance tolerance</b>	± 3 mm
<b>Housing design</b>	Large
<b>Light source</b>	LED, RGB <sup>1)</sup>
<b>Wave length</b>	470 nm, 525 nm, 625 nm
<b>Light emission</b>	Short device side
<b>Light spot size</b>	0.9 mm x 3.8 mm
<b>Light spot direction</b>	Vertical <sup>2)</sup>
<b>Receiving filters</b>	None
<b>Teach-in mode</b>	2-point teach-in
<b>Output function</b>	Light/dark switching
<b>Delay time</b>	Adjustable
<b>Delivery status</b>	2-point teach-in
<b>Parameter presets</b>	None
<b>Setting the key lock</b>	Standard
<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>	$\leq 5 \text{ V}_{\text{pp}}$ <sup>2)</sup>
<b>Current consumption</b>	< 100 mA <sup>3)</sup>
<b>Switching frequency</b>	25 kHz <sup>4)</sup>
<b>Response time</b>	20 $\mu\text{s}$ <sup>5)</sup>
<b>Jitter</b>	10 $\mu\text{s}$
<b>Switching output</b>	PNP, NPN
<b>Switching output (voltage)</b>	PNP: HIGH = $V_S - 3 \text{ V}$ / LOW = 0 V, NPN: HIGH = $V_S$ / LOW $\leq 3 \text{ V}$
<b>Output current <math>I_{\text{max.}}</math></b>	100 mA <sup>6)</sup>
<b>Retention time (ET)</b>	35 ms, non-volatile memory
<b>Protection class</b>	III
<b>Circuit protection</b>	$U_V$ connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Enclosure rating</b>	IP67

<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> Signal transit time with resistive load.

<sup>6)</sup> Total current of all Outputs.

## Mechanics

<b>Housing material</b>	VISTAL®
<b>Optics material</b>	COP
<b>Connection type</b>	Male connector M12, 4-pin
<b>Weight</b>	94 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>UL File No.</b>	E181493

## Certificates

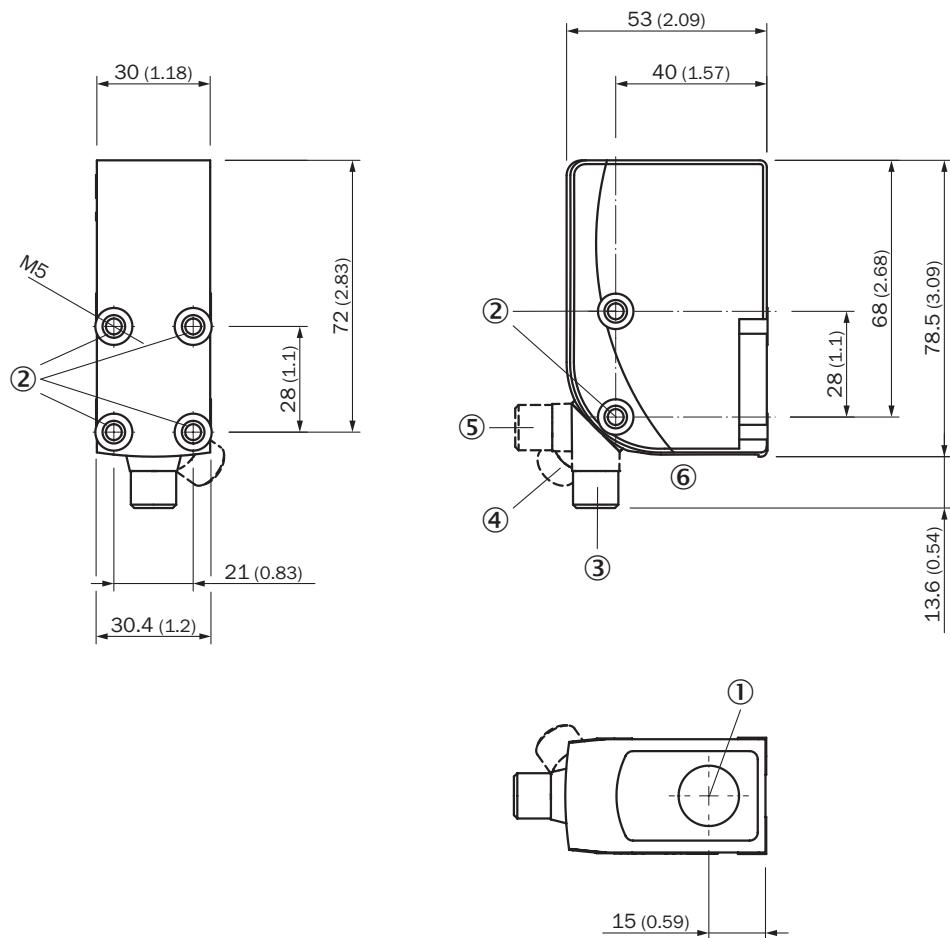
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China-RoHS</b>	✓
<b>cULus certificate</b>	✓
<b>Photobiological safety (IEC EN 62471)</b>	✓

## Classifications

<b>ECLASS 5.0</b>	27270906
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<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

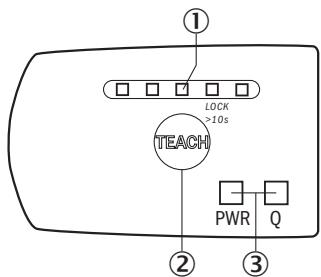
## Dimensional drawing



Dimensions in mm (inch)

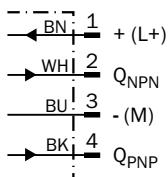
- ① Optical axis
- ② Threaded mounting hole M5
- ③ M12 male connector, delivery state
- ④ M12 male connector, end stop right
- ⑤ M12 male connector, end stop left
- ⑥ display and adjustment elements

### display and adjustment elements



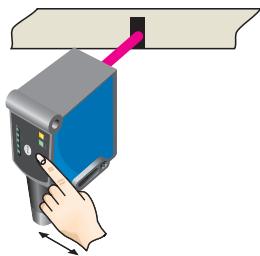
- ① Bar graph
- ② single teach-in button
- ③ LED status indicator

### Connection diagram Cd-086

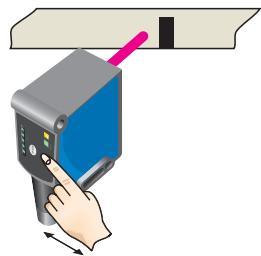


## KTS Core Easy Teach - Setting the switching threshold

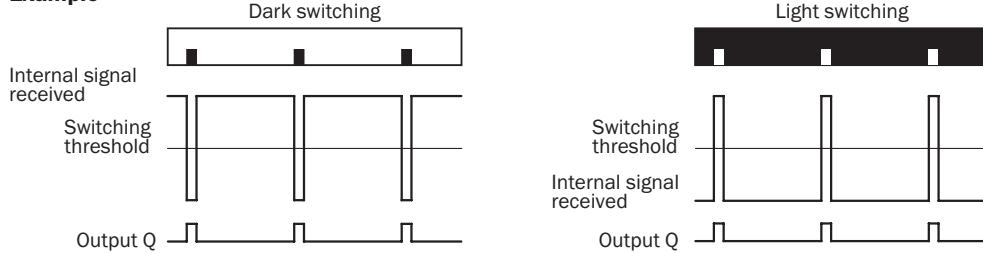
Suitable for manual positioning of the object to be detected, e.g. marks and background.

**1. Position mark**

When setting the contrasts to be detected, the first LED (green) flashes in the bar graph.  
Press Teach-in pushbutton.

**2. Position background**

When setting the contrasts to be detected, the second LED (green) flashes in the bar graph.  
Press Teach-in pushbutton.

**Example****Switching characteristics**

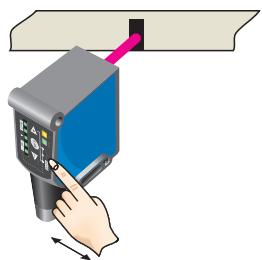
The optimum emitted light is selected automatically (at RGB variants).  
Static teach-in: light/dark setting is defined using teach-in sequence.

Keylock (activation and deactivation): Press and hold the Teach-in pushbutton > 10 s.

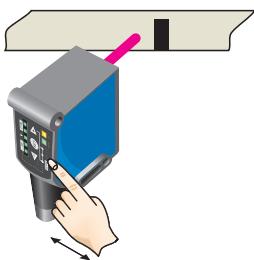
Teach-in failure: The Q-LED (yellow) flashes and all LEDs flash on the bar graph (green).

## KTS Core - setting the switching threshold (2-point teach-in)

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

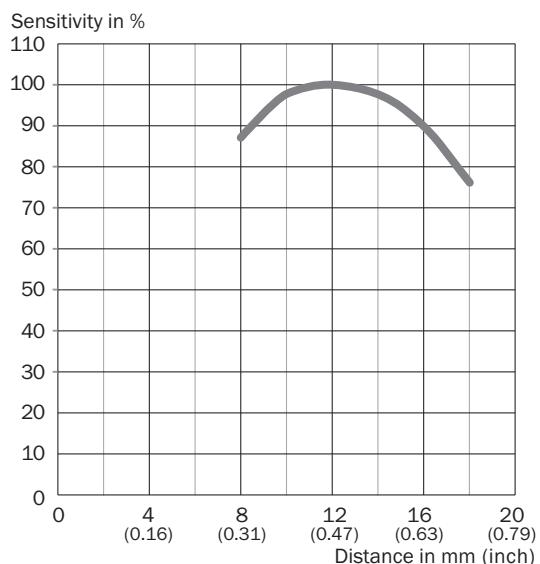
**1. Position mark**

When setting the contrasts to be detected, the first LED (green) flashes in the bar graph. Press set button.

**2. Position background**

When setting the contrasts to be detected, the second LED (green) flashes in the bar graph. Press set button. The Quality of Teach is displayed.

## Sensing distance



## Recommended accessories

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

	Brief description	Type	part no.
Mounting systems	 <ul style="list-style-type: none"><li><b>Description:</b> Plate G 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> W34, LUT3, KT5-2, KT10, CS8, W24-2, KT8, KT8</li></ul>	BEF-KHS-G01	2022464

	<b>Brief description</b>	<b>Type</b>	<b>part no.</b>
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</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>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>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF2A14-050VB3XLEAX	2096235

## 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)