



KTS Core

Universal contrast detection in modern housing

CONTRAST SENSORS

SICK
Sensor Intelligence.



Technical data overview

Dimensions (W x H x D)	26 mm x 62 mm x 47.5 mm
Sensing distance	13 mm
Type of light	LED ¹⁾ White LED ¹⁾ RGB
Light spot size	1.2 mm x 3.9 mm
Switching frequency	12.5 kHz ²⁾ 25 kHz ²⁾
Response time	40 µs ³⁾ 20 µs ³⁾
Switching output	Push-pull: PNP/NPN NPN PNP, NPN (depending on type)
Adjustment	2-point teach-in Teach-in dynamic 2-point teach-in, teach-in dynamic (depending on type)
Connection type	Male connector M12, 4-pin
Communication interface	-

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

²⁾ With light/dark ratio 1:1.

³⁾ Signal transit time with resistive load.

Product description

High performance for universal application in a range of applications: The new KTS Core in modern design with white LED or RGB LED and VISTAL® housing impresses with its switching frequency and gray line resolution, different teach-in variants and manual switching threshold adjustment. A response time of 20 µs and a jitter of 10 µs ensure reliable and accurate detection of contrast differences, e.g. in print marks, even on high-gloss materials. Thanks to various teach-in processes and manual switching threshold adjustment, commissioning is more flexible and detection more stable. The KTS Core detects even the smallest differences in contrast and is therefore well-suited for use in a wide range of applications.

At a glance

- White LED or RGB LED
- High gray line resolution
- Very large dynamic range means reliable detection of contrasts on glossy materials
- 25 kHz switching frequency
- Display for easy sensor adjustment
- 2-point and dynamic teach-in
- Manual switching threshold adjustment
- Light/dark switching

Your benefits

- High switching frequency for use in quick machine processes with high switching accuracy requirements
- Display and flexible sensor settings for easy sensor handling and user-friendly operation
- High gray line resolution enables the detection of very small contrast differences and high-gloss materials - high process stability and fewer downtimes
- Various teach-in processes for ideal sensor and process setting in different applications
- Manual switching threshold adjustment supports stable material detection and individual sensor adaption to different contrasts

Fields of application

- Applications in which contrast is a decisive distinguishing feature
- Print mark detection for controlling the cutting process
- Print control in the print and paper industry
- Positioning of tubes when filling
- Label alignment on bottles
- Monitoring of wafer surfaces
- Roll end monitoring

Ordering information

Other models and accessories → www.sick.com/KTS_Core

- **Special applications:** High Sensitivity
- **Communication interface:** -
- **Teach-in mode:** 2-point teach-in
- **Light source:** LED, White (Average service life: 100,000 h at $T_U = +25\text{ °C.}$)

Sensing distance	Switching output	Light spot size	Connection type Detail	Device type	Light emission	Type	Part no.
≤ 13 mm	NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Easy Teach	Long side of housing	KTS-MN41141142ZZZZ	1219612
	Push-pull: PNP/NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Easy Teach	Long side of housing	KTS-MB41141142ZZZZ	1219606

- **Special applications:** standard
- **Communication interface:** -
- **Teach-in mode:** 2-point teach-in
- **Light source:** LED, RGB (Average service life: 100,000 h at $T_U = +25\text{ °C.}$)

Sensing distance	Switching output	Light spot size	Connection type Detail	Device type	Light emission	Type	Part no.
≤ 13 mm	NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Easy Teach	Long side of housing	KTS-WN41141142ZZZZ	1219611
	PNP, NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Easy Teach	Long side of housing	KTS-WS41141142ZZZZ	1221031
	Push-pull: PNP/NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Easy Teach	Long side of housing	KTS-WB41141142ZZZZ	1218200

- **Special applications:** standard
- **Communication interface:** -
- **Teach-in mode:** Teach-in dynamic
- **Light source:** LED, RGB (Average service life: 100,000 h at $T_U = +25\text{ °C.}$)

Sensing distance	Switching output	Light spot size	Connection type Detail	Device type	Light emission	Type	Part no.
≤ 13 mm	Push-pull: PNP/NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Easy Teach	Long side of housing	KTS-WB51141142ZZZZ	1219064

- **Special applications:** standard
- **Communication interface:** -
- **Teach-in mode:** 2-point teach-in, teach-in dynamic
- **Light source:** LED, White (Average service life: 100,000 h at $T_U = +25\text{ °C.}$)

Sensing distance	Switching output	Light spot size	Connection type Detail	Device type	Light emission	Type	Part no.
≤ 13 mm	Push-pull: PNP/NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Standard	Long side of housing	KTS-MB81141142ZZZZ	1078119

- **Special applications:** standard
- **Communication interface:** -
- **Teach-in mode:** 2-point teach-in, teach-in dynamic
- **Light source:** LED, RGB (Average service life: 100,000 h at $T_U = +25\text{ °C.}$)

Sensing distance	Switching output	Light spot size	Connection type Detail	Device type	Light emission	Type	Part no.
≤ 13 mm	Push-pull: PNP/NPN	1.2 mm x 3.9 mm	Male connector M12, 4-pin	Standard	Long side of housing	KTS- WB81141142ZZZ	1078120

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