KTS-WN41141142ZZZZ

KTS Core

CONTRAST SENSORS

SICK
Sensor Intelligence.

KTS-WN41141142ZZZZ | KTS Core

CONTRAST SENSORS

Illustration may differ

Ordering information

Type	Part no.
KTS-WN41141142ZZZZ	1219611

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

Detailed technical data

Features

Special applications	Standard
Device type	Easy Teach
Dimensions (W x H x D)	26 mm x 62 mm x 47.5 mm
Sensing distance	≤ 13 mm
Sensing distance tolerance	± 3 mm
Housing design	Middle
Light source	LED, RGB [1]
Wave length	470 nm, 525 nm, 625 nm
Light emission	Long side of housing
Light spot size	1.2 mm x 3.9 mm
Light spot direction	Vertical [2]
Receiving filters	None
Teach-in mode	2-point teach-in
Output function	Light/dark switching
Delay time	-
Special features	-
Delivery status	2-point teach-in
Parameter presettings	None
Setting the key lock	Standard

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

[2] In relation to long side of housing.

Mechanics/electronics

Supply voltage	10.8 V DC … 28.8 V DC [1]
Ripple	≤ 5 V_{pp} [2]
Current consumption	< 100 mA [3]
Switching frequency	25 kHz [4]
Response time	20 µs [5]
Jitter	10 µs
Switching output	NPN
Switching output (voltage)	NPN: HIGH = V_S / LOW ≤ 3 V
Output current $I_{max.}$	100 mA [6]
Input, teach-in (ET)	Teach: U < 2 V
Retention time (ET)	35 ms, non-volatile memory
Connection type	Male connector M12, 4-pin
Protection class	III
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP67
Weight	68 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, COP

[1] Limit values: DC 12 V (–10 %) … DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A.

[2] May not exceed or fall below U_V tolerances.

[3] Without load.

[4] With light/dark ratio 1:1.

[5] Signal transit time with resistive load.

[6] Total current of all Outputs.

Ambient data

Ambient operating temperature	–20 °C … +60 °C
Ambient temperature, storage	–25 °C … +75 °C
Shock load	According to IEC 60068-2-27 (30 g/11 ms)
UL File No.	E181493

Classifications

eCl@ss 5.0	27270906
eCl@ss 5.1.4	27270906
eCl@ss 6.0	27270906
eCl@ss 6.2	27270906
eCl@ss 7.0	27270906
eCl@ss 8.0	27270906
eCl@ss 8.1	27270906
eCl@ss 9.0	27270906
eCl@ss 10.0	27270906

| eCl@ss 11.0	27270906
eCl@ss 12.0	27270906
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))
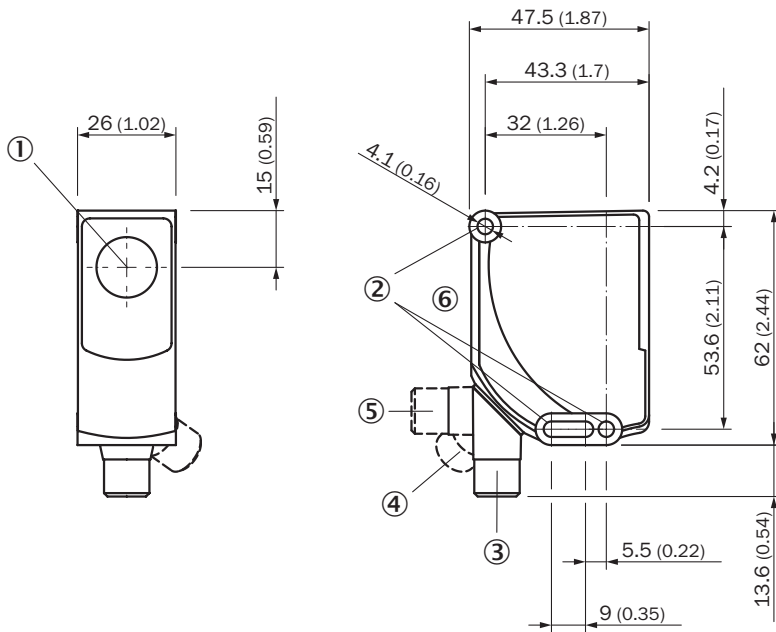
① Optical axis
② Fixing hole
③ M12 male connector, delivery state
④ M12 male connector, end stop right
⑤ M12 male connector, end stop left
⑥ Display and adjustment elements

Adjustments

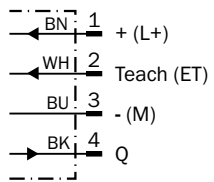Display and adjustment elements
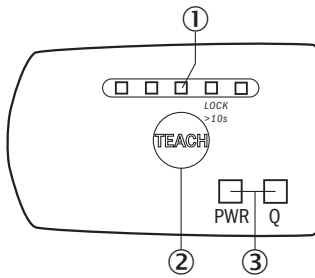
① Bar graph
② Single teach-in button
③ LED status indicator

Connection diagram

Cd-380

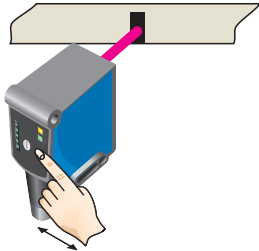|		
BN	1	+ (L+)
WH	2	Teach (ET)
BU	3	- (M)
BK	4	Q

Concept of operation

KTS Core Easy Teach - Setting the switching threshold

Suitable for manual positioning of the object to be detected, e.g. marks and background.
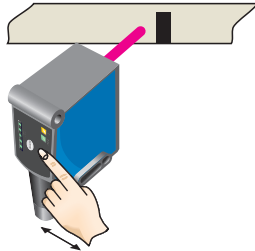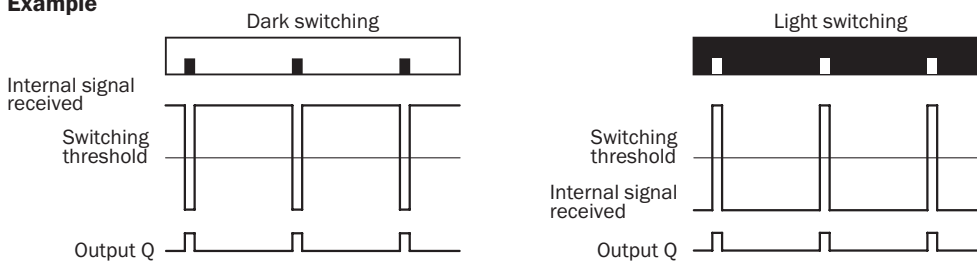
1. Position mark	**2. Position background**
When setting the contrasts to be detected, the first LED (green) flashes in the bar graph. Press Teach-in pushbutton.	When setting the contrasts to be detected, the second LED (green) flashes in the bar graph. Press Teach-in pushbutton.

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.

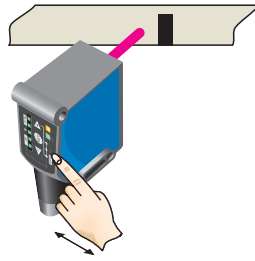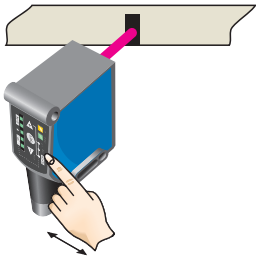Keylock (activation and deactivation): Press and hold the Teach-in pushbutton > 10 s.

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.

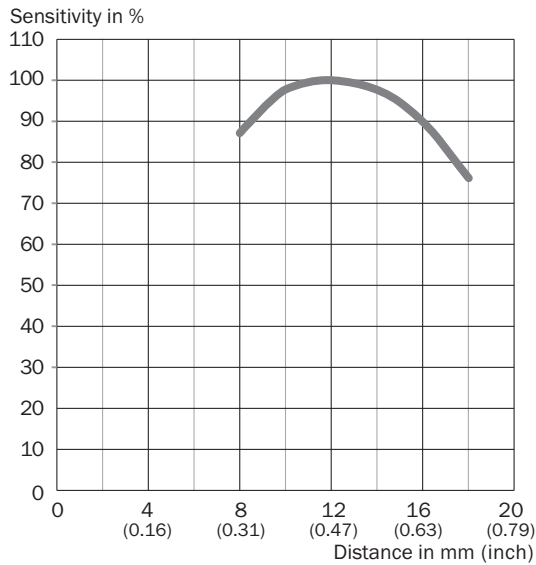| 1. Position mark	2. Position background
When setting the contrasts to be detected, the first LED (green) flashes in the bar graph. Press set button.	When setting the contrasts to be detected, the second LED (green) flashes in the bar graph. Press set button. The Quality of Teach is displayed.

Sensing distance

KTS Core

Sensitivity in %

Distance in mm (inch)

Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate K for universal clamp bracket, steel, zinc coated, Universal clamp (2022726), mounting hardware	BEF-KHS-K01	2022718

	Brief description	Type	Part no.
	Mounting bar, straight, 200 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12G-A	4056054
	Mounting bar, L-shaped, 150 mm x 150 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12L-A	4056052
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

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.

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