



DATA SHEET

KT5G-2P1251S29

KT5
Contrast sensors

SICK

Sensor Intelligence



Illustration may differ

CONTRAST SENSORS

KT5G-2P1251S29

ORDERING INFORMATION

Type	part no.
KT5G-2P1251S29	1023002

Further device versions and accessories at www.sick.com/KT5

DETAILED TECHNICAL DATA

FEATURES

Housing design	Middle
Dimensions (W x H x D)	30.4 mm x 53 mm x 80 mm
Light source	LED, visible green light ¹⁾
Light emission	Long and short side of housing, exchangeable
Light spot size	10 mm x 35 mm
Light spot direction	Vertical ²⁾
Wave length	520 nm
Sensing distance	≤ 200 mm ³⁾
Adjustment	Potentiometer
Output function	Light/dark switching
Special features	Analog

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

²⁾ In relation to long side of housing.

³⁾ From leading edge of lens.

ELECTRONICS

Supply voltage	10 V DC ... 30 V DC ¹⁾
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¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_v tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Short-circuit-proof.

⁶⁾ Reference voltage DC 50 V.

Ripple	$\leq 5 \text{ V}_{pp}^{2)}$
Current consumption	$< 80 \text{ mA}^{3)}$
Switching frequency	$10 \text{ kHz}^{4)}$
Response time	$50 \mu\text{s}$
Switching output	PNP
Switching output (voltage)	PNP: $\text{HIGH} = U_v \leq 2 \text{ V}$ / LOW approx. 0 V
Switching mode	Light/dark switching
Analog output	$2 \text{ mA} \dots 10 \text{ mA}$
Output current I_{max}	$100 \text{ mA}^{5)}$
Time delay	None
Protection class	II ⁶⁾
Circuit protection	U_v connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	Male connector M12, 4-pin

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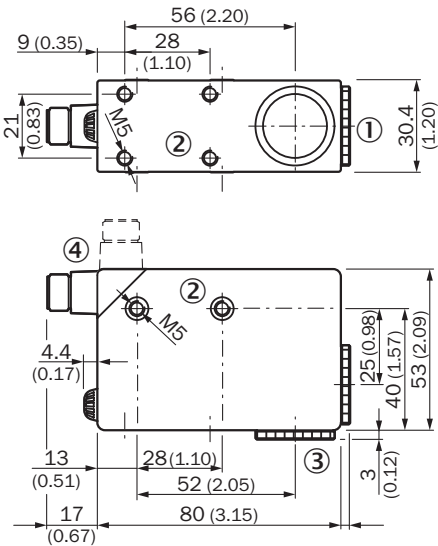
MECHANICS

Housing material	Zinc diecast
Weight	400 g

AMBIENT DATA

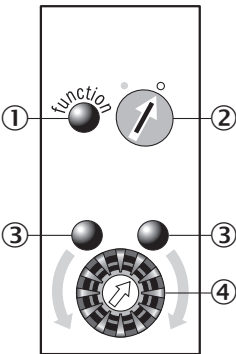
Ambient operating temperature	$-10 \text{ }^{\circ}\text{C} \dots +55 \text{ }^{\circ}\text{C}$
Ambient temperature, storage	$-25 \text{ }^{\circ}\text{C} \dots +75 \text{ }^{\circ}\text{C}$
Shock load	According to IEC 60068
Enclosure rating	IP67
UL File No.	NRKH.E181493 & NRKH7.E181493

DIMENSIONAL DRAWING



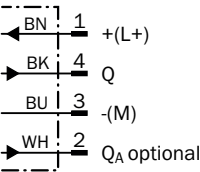
- Dimensions in mm (inch)
- ① Lens (light transmission), can be exchanged for pos. 4
 - ② M5 threaded mounting hole, 5.5 mm deep
 - ③ Blind screw can be replaced by pos. 1
 - ④ Connector M12 (rotatable up to 90°)

ADJUSTMENTS KT5-2 POTENTIOMETER

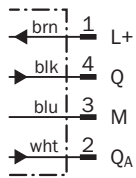


- ① Function signal indicator (yellow)
- ② Pre-selection switch (light/dark switching)
- ③ Switching threshold adjustment
- ④ Installation aid (green)

CONNECTION DIAGRAM CD-327

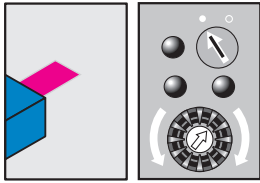


CONNECTION DIAGRAM



CONCEPT OF OPERATION KT5-2 POTENTIOMETER

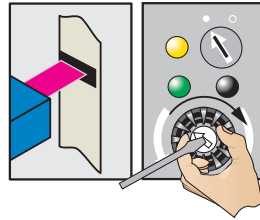
1. Select switching function (light/dark)



Turn the rotary switch to the desired position.

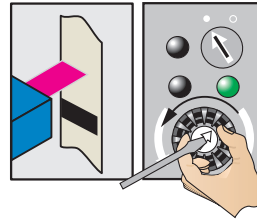
- = light switching
- = dark switching

2. Position mark

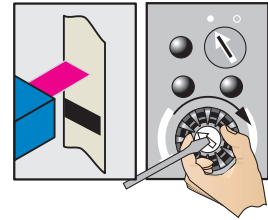


Turn potentiometer in the direction shown (green LED illuminates) until the yellow LED status changes and the green LED opposite illuminates.

3. Position background

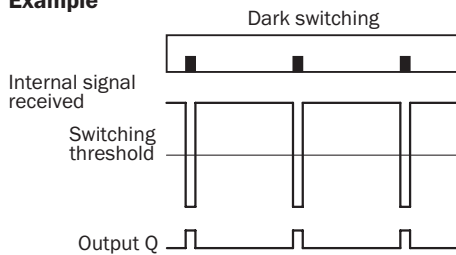
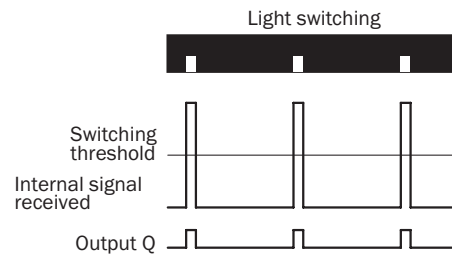


Gradually turn back the potentiometer (count the number of turns) until the yellow LED changes status again and illuminates.



Turn the potentiometer forward again by half the number of turns to ensure that the switching threshold is optimally set.

Example



Switching characteristics

The switching threshold is set in the center between the background and the mark.

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1023002



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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