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DATA SHEET

KT5G-2N3151

KT5
Contrast sensors

SICK Sensor Intelligence

Illustration may differ

CONTRAST SENSORS

KT5G-2N3151

ORDERING INFORMATION

Type	part no.
KT5G-2N3151	1018039

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	1.2 mm x 4.2 mm
Light spot direction	Round [2]
Wave length	520 nm
Sensing distance	≤ 10 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]

[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	≤ 5 V_{pp} [2]
Current consumption	< 80 mA [3]
Switching frequency	10 kHz [4]
Response time	50 µs
Switching output	NPN
Switching output (voltage)	NPN: HIGH = approx. U_V / LOW ≤ 2 V
Switching mode	Light/dark switching
Analog output	0.3 mA ... 10 mA
Output current $I_{max.}$	100 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

[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.

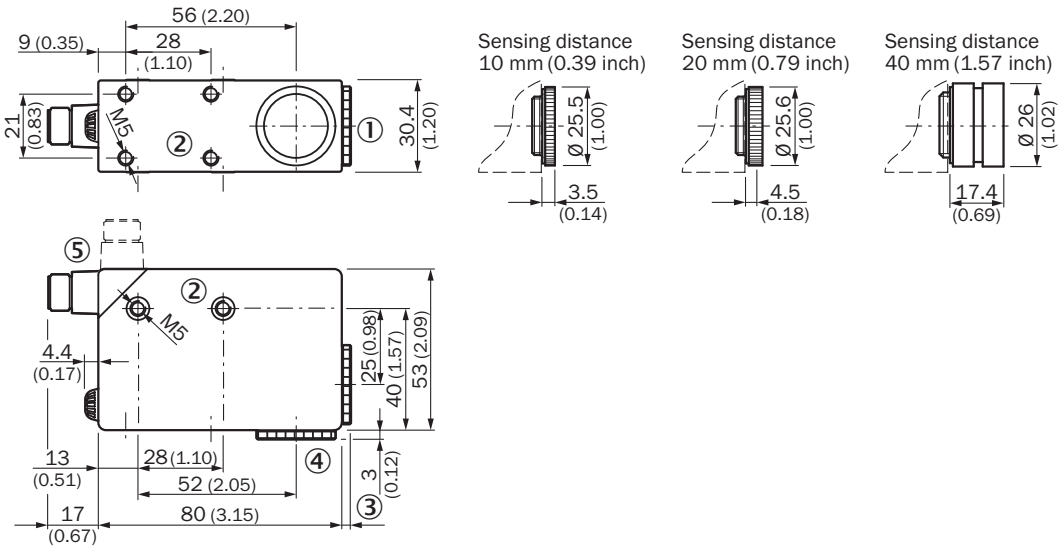
MECHANICS

Housing material	Zinc diecast
Weight	400 g

AMBIENT DATA

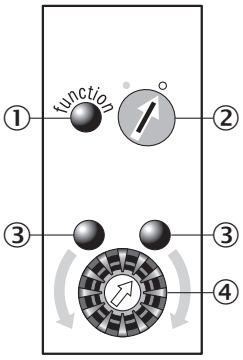
Ambient operating temperature	–10 °C ... +55 °C
Ambient temperature, storage	–25 °C ... +75 °C
Shock load	According to IEC 60068
Enclosure rating	IP67
UL File No.	NRKH.E181493 & NRKH7.E181493

DIMENSIONAL DRAWING KT5-2 POTENTIOMETER



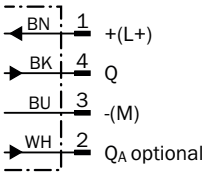
Dimensions in mm (inch)
① Lens (light transmission), can be exchanged for pos. 4
② M5 threaded mounting hole, 5.5 mm deep
③ see dimensional drawings of lenses
④ Blind screw can be replaced by pos. 1
⑤ Connector M12 (rotatable up to 90°)

ADJUSTMENTS KT5-2 POTENTIOMETER



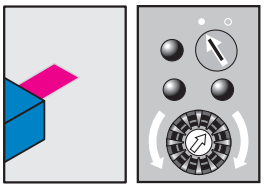
① Function signal indicator (yellow)
② Pre-selection switch (light/dark switching)
③ Switching threshold adjustment
④ Installation aid (green)

CONNECTION DIAGRAM CD-327



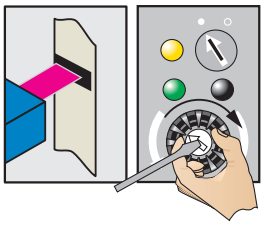
CONCEPT OF OPERATION KT5-2 POTENTIOMETER

1. Select switching function (light/dark)



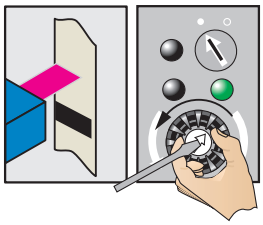
Turn the rotary switch to the desired position.
○ = light switching
● = dark switching

2. Position mark

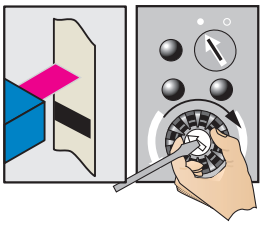


Turn potentiometer in the direction shown (green LED illuminates) until the yellow LED status changes and the green LED opposite illuminates.

3. Position background

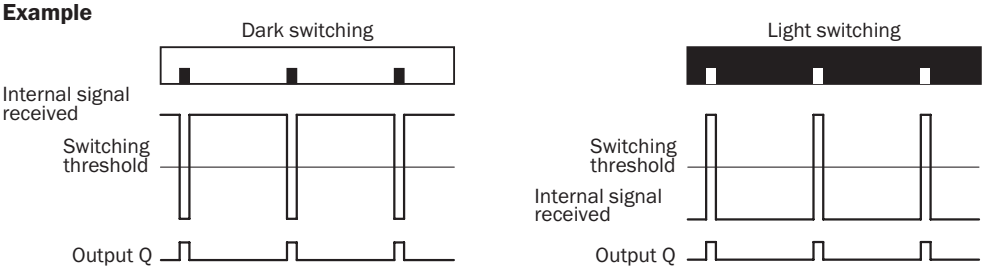


Gradually turn back the potentiometer (count the number of turns) until the yellow LED changes status again and illuminates.



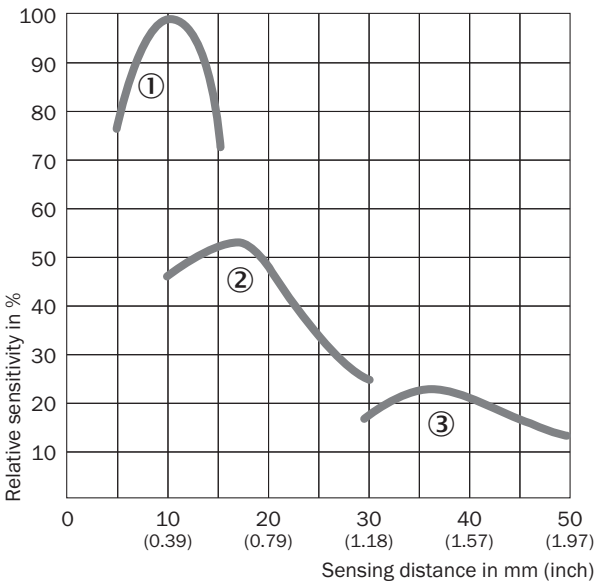
Turn the potentiometer forward again by half the number of turns to ensure that the switching threshold is optimally set.

Example



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

SENSING DISTANCE



① Sensing distance 10 mm
② Sensing distance 20 mm
③ Sensing distance 40 mm

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/1018039

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SICK AT A GLANCE

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