Data sheet

KT5RG-2N1116

KT5

CONTRAST SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
KT5RG-2N1116	1027394

Other models and accessories ➜ 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 red light [1] Green
Light spot size	1.2 mm x 4.2 mm
Light spot direction	Vertical [2]
Wave length	640 nm, 525 nm
Sensing distance	≤ 10 mm [3]
Adjustment	Teach-in button
Teach-in mode	Static 2-point teach-in

[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]
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

[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.

Output current $I_{max.}$	100 mA [5]
Input, teach-in (ET)	NPN Teach: U < 2 V Run: U = 10 V ... < U_V
Retention time (ET)	25 ms, non-volatile memory
Time delay	None
Protection class	III
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.

Mechanics

Housing material	Zinc diecast
Weight	400 g

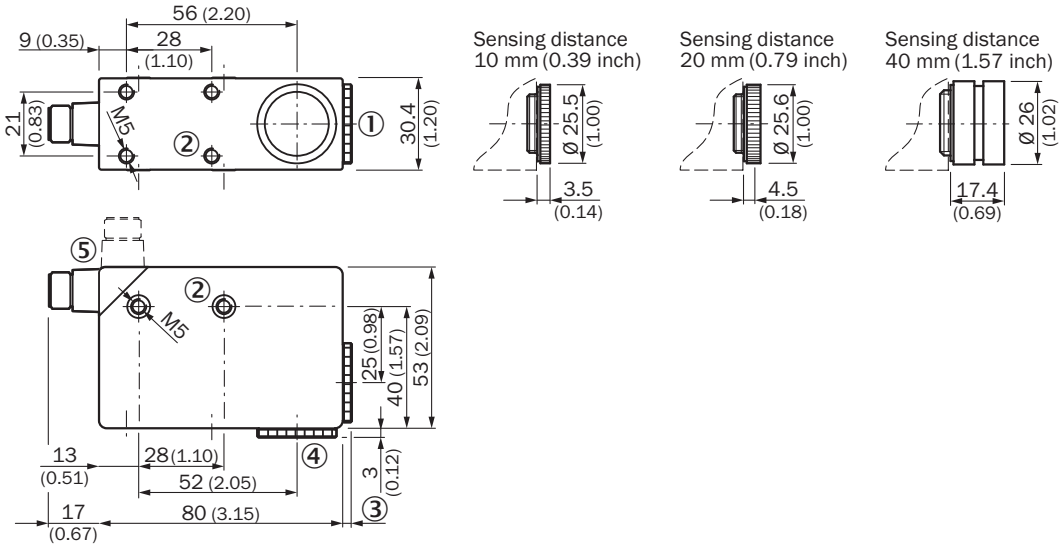
Ambient data

Ambient operating temperature	–10 °C ... +55 °C
Ambient temperature, storage	–25 °C ... +75 °C
Shock load	According to IEC 60068
Enclosure rating	IP67

Classifications

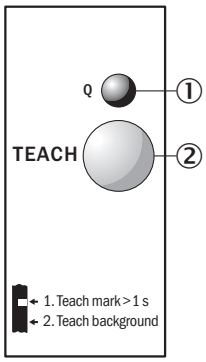
ECLASS 5.0	27270906
ECLASS 5.1.4	27270906
ECLASS 6.0	27270906
ECLASS 6.2	27270906
ECLASS 7.0	27270906
ECLASS 8.0	27270906
ECLASS 8.1	27270906
ECLASS 9.0	27270906
ECLASS 10.0	27270906
ECLASS 11.0	27270906
ECLASS 12.0	27270906
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	39121528

Dimensional drawing KT5-2 Teach-in, KT5-2 Display



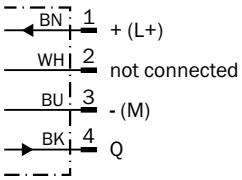
Dimensions in mm (inch)
① Lens (light transmission), can be exchanged for pos. 4
② M5 threaded mounting hole, 5.5 mm deep
③ see dimensional drawings of lenses
④ Blind screw can be replaced by pos. 1
⑤ Connector M12 (rotatable up to 90°)

Adjustments KT5-2 Teach-in, KT5RG-xxx6



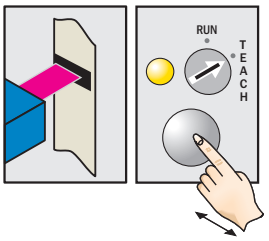
① Function signal indicator (yellow)
② Teach-in button

Connection diagram Cd-066



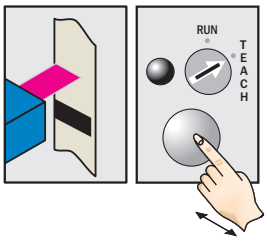
Concept of operation KT5-2 Teach-in, teach-in static

1. Position mark



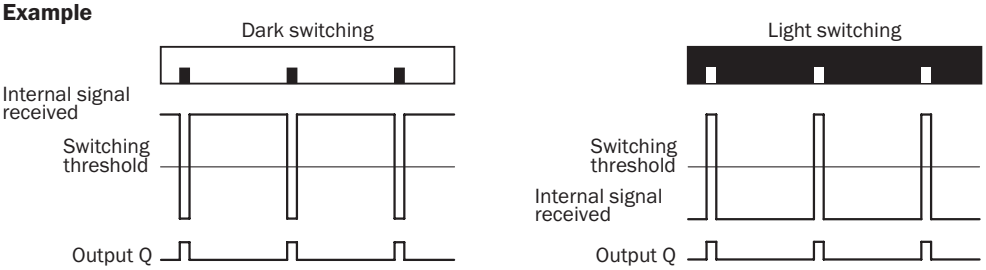
Turn rotary switch to “Teach” position. Press and hold teach-in button > 1 s.
Red emitted light and yellow LED flash.

2. Position background



Press and hold teach-in button > 1 s.
Yellow LED goes out.

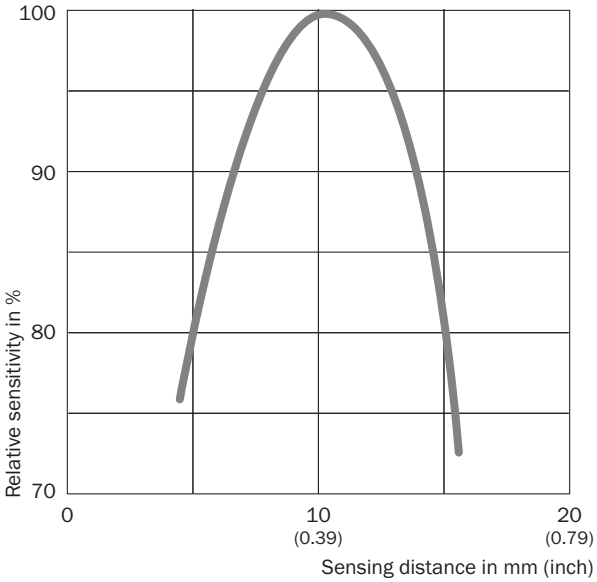
Example



Switching characteristics

The optimum emitted light is selected automatically.
Light/dark setting is defined using teach-in sequence.
The switching threshold is set in the center between the background and the mark.
Teach-in can also be performed using an external control signal.

Sensing distance



Recommended accessories

Other models and accessories ➜ www.sick.com/KT5

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Plate G for universal clamp bracket • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Universal clamp (2022726), mounting hardware • **Usable for:** W34, LUT3, KT5-2, KT10, CS8, W24-2, KT8, KT8	BEF-KHS-G01	2022464
	• **Description:** Plate K for universal clamp bracket • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Universal clamp (2022726), mounting hardware • **Usable for:** W11-2, W12-3, W14-2, W18-3, W23-2, W24-2, W27-3, W30, W32, W34, W36, PL50A, PL80A, P250, UC12, LUT3, KT2, KT5-2, KT8, CS8, DT2, DS30, DS40, W12-2 Laser, W16, W26, KT5	BEF-KHS-K01	2022718
reflectors and optics			
	• **Description:** Lens, 40 mm sensing distance	OBJ-210	2010945
	• **Description:** Lens, 10 mm sensing distance	OBJ-211	1004936

	Brief description	Type	part no.
connectors and cables			
	• **Description:** Unshielded • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1204-G	6007302
	• **Description:** Unshielded • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1204-W	6007303
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A14-020VB3XLEAX	2096234
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A14-050VB3XLEAX	2096235
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A14-100VB3XLEAX	2096236
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A14-020VB3XLEAX	2095895
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A14-050VB3XLEAX	2095897
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A14-100VB3XLEAX	2095898
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A14-C60VB3XLEAX	2145709
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 1 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A14-010VB3XLEAX	2145710
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 4-wire, PVC	YF2A14-C60VB3XLEAX	2145707

	Brief description	Type	part no.
	• **Application:** Uncontaminated zones, Zones with chemicals		
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 1 m, 4-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A14-010VB3XLEAX	2145708

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