

CONTRAST SENSORS



Illustration may differ

Ordering information

Type	part no.
KTH5W-2N1216D	1028250

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

Detailed technical data

Features

Dimensions (W x H x D)	30.4 mm x 53 mm x 80 mm
Sensing distance	≤ 20 mm ¹⁾
Housing design	Rectangular
Light source	LED, RGB ²⁾
Wave length	470 nm, 525 nm, 640 nm
Light emission	Long and short side of housing, exchangeable
Light spot size	1.5 mm x 5.5 mm
Light spot direction	Vertical ³⁾
Adjustment	Teach-in button
Teach-in mode	Static 2-point teach-in
Special features	Hologram

¹⁾ From leading edge of lens.

²⁾ Average service life: 100,000 h at T_U = +25 °C.

³⁾ In relation to long side of housing.

Electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Current consumption	< 130 mA ³⁾
Switching frequency	10 kHz ⁴⁾
Response time	50 μs ⁵⁾
Switching output	NPN

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_y tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Signal transit time with resistive load.

⁶⁾ Reference voltage DC 50 V.

Switching output (voltage)	NPN: HIGH = approx. U_V / LOW ≤ 2 V
Output current $I_{\max}$	100 mA
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	II ⁶⁾
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression

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) Signal transit time with resistive load.

6) Reference voltage DC 50 V.

Mechanics

Housing material	Zinc diecast
Connection type	Plug, M12, 5-pin
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

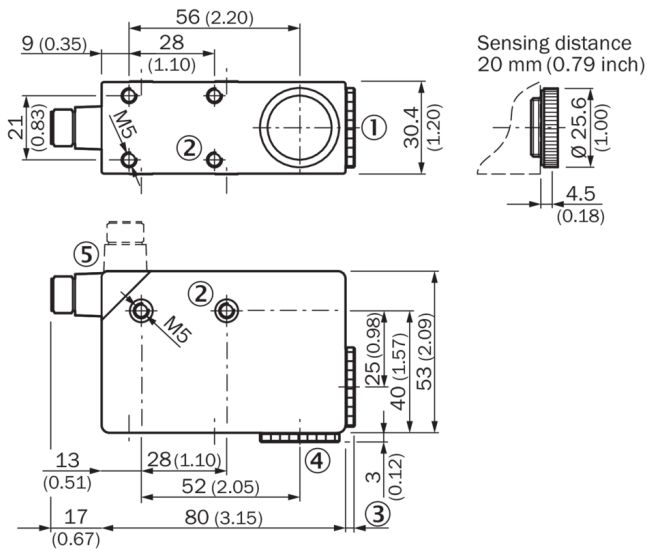
Classifications

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

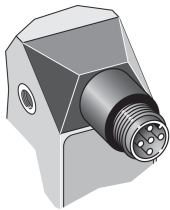
Dimensional drawing



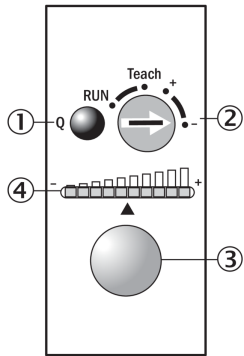
Dimensions in mm (inch)

- ① Lens (light transmission), can be exchanged for pos. 4
- ② M5 threaded mounting hole, 5.5 mm deep
- ③ See dimensional drawing of lens
- ④ Blind screw can be replaced by pos. 1
- ⑤ 5-pin, M12 x 1 connector (rotatable trough 90°)

Pinouts

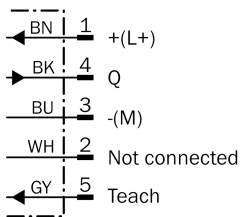


Adjustments KT5-2 Display



- ① Function signal indicator (yellow)
- ② Pre-selection switch
- ③ Teach-in button
- ④ Bar graph (green)

Connection diagram Cd-323



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			
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: $\leq 0.75 \text{ mm}^2$	DOS-1205-G	6009719
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: $\leq 0.75 \text{ mm}^2$	DOS-1205-W	6009720
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-020VB5XLEAX	2096215
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-050VB5XLEAX	2096216
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-100VB5XLEAX	2096217
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A15-020VB5XLEAX	2096239
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A15-050VB5XLEAX	2096240
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A15-100VB5XLEAX	2096241
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-C60VB5XLEAX	2145573
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-010VB5XLEAX	2145574
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded	YG2A15-030VB5XLEAX	2145575

	Brief description	Type	part no.
	• Application: Zones with chemicals, Uncontaminated zones • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 0.6 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones	YF2A15-C60VB5XLEAX	2145570
	• Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 3 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones	YF2A15-030VB5XLEAX	2145572

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