



KT3L-P3216

KT3

CONTRAST SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
KT3L-P3216	1026244

Other models and accessories → www.sick.com/KT3

Detailed technical data

Features

Dimensions (W x H x D)	12 mm x 40 mm x 22 mm
Sensing distance	≤ 40 mm
Sensing distance tolerance	± 20 mm
Housing design	Rectangular
Light source	Laser, Red ¹⁾
Laser class	II
Wave length	655 nm
Light spot size	1 mm x 2 mm
Light spot direction	Vertical ²⁾
Operating distance	20 mm ... 60 mm
Adjustment	Teach-in button
Teach-in mode	Static 2-point teach-in

¹⁾ Average service life: 50,000 h at T_U = +25 °C.

²⁾ In relation to long side of housing.

Electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Current consumption	< 35 mA ³⁾
Switching frequency	1.5 kHz ⁴⁾
Response time	400 μs ⁵⁾
Switching output	PNP

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)	PNP: HIGH = $U_V \leq 2 \text{ V}$ / LOW approx. 0 V
Output current $I_{\max}$	100 mA
Input, teach-in (ET)	PNP Teach $U > 8 \text{ V}$ Run: $U < 2 \text{ V}$
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	ABS
Connection type	Male connector M12, 4-pin
Weight	+ 11 g

Ambient data

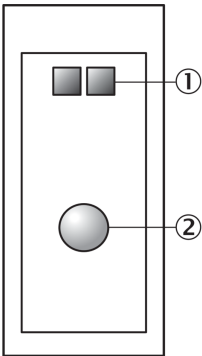
Ambient operating temperature	-10 °C ... +45 °C
Ambient temperature, storage	-20 °C ... +75 °C
Shock load	According to IEC 60068
Enclosure rating	IP67
UL File No.	NRKH.E181493 & NRKH7.E181493, CDRH-conform

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

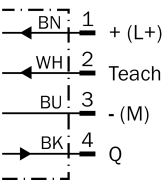
UNSPSC 16.0901	39121528
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Adjustments



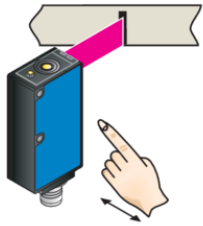
- ① LED signal strength indicator
- ② Teach-in button

Connection diagram Cd-092



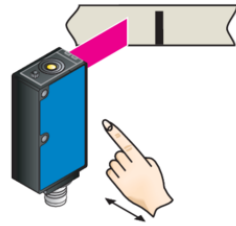
Concept of operation Teach-in static

1. Position mark



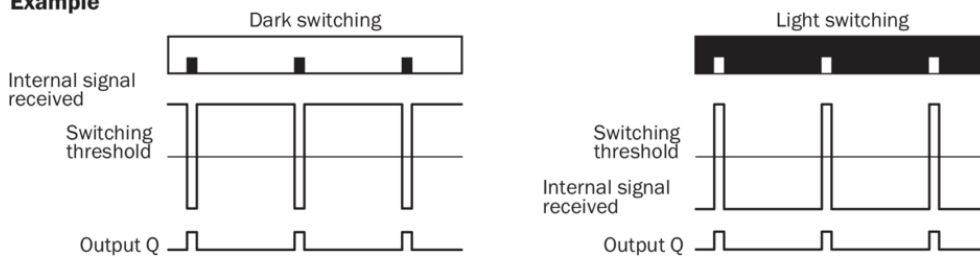
Press and hold teach-in button > 1 s.
Yellow LED flashes slowly.

2. Position background



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

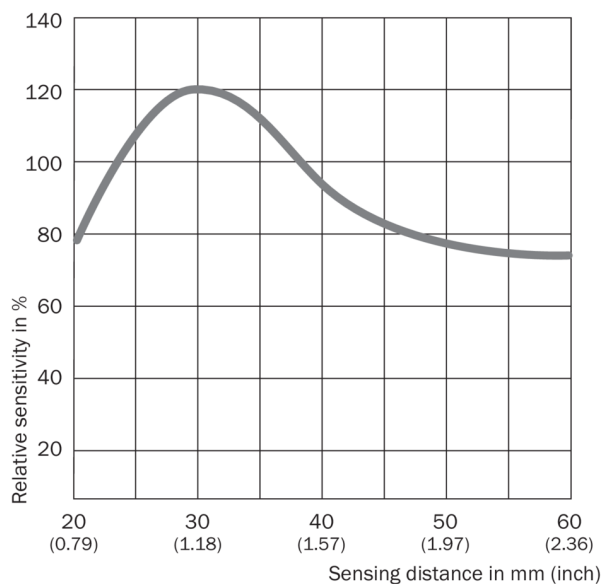
Example



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/KT3

	Brief description	Type	part no.
Mounting systems			
	• Description: Mounting bracket • Material: Steel • Details: Steel, zinc coated • Items supplied: Mounting hardware included • Suitable for: W9-3	BEF-WN-W9-2	2022855
	• Description: Plate L for universal clamp bracket • Material: Steel • Details: Steel, zinc coated • Items supplied: Universal clamp (2022726), mounting hardware • Usable for: W8, W100, W140-2, W150, W160, W9-2, W250, P250, LUT2, KT3, CSM1, G6, W100-2, W250, LUT2, W9-3, W150, CSM, LUTM, G10, W8, P250, KTM Core, KTM Prime	BEF-KHS-L01	2023057

	Brief description	Type	part no.
connectors and cables			
	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm²	DOS-1204-G	6007302
	Connection type head A: Female connector, M12, 4-pin, angled, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm²	DOS-1204-W	6007303
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-020VB3XLEAX	2096234
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-050VB3XLEAX	2096235
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-100VB3XLEAX	2096236
	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 15 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-150VB3XLEAX	2096237
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A14-020VB3XLEAX	2095895
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A14-050VB3XLEAX	2095897
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A14-100VB3XLEAX	2095898
	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 Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A14-C60VB3XLEAX	2145709
	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 Description: Sensor/actuator cable, unshielded	YG2A14-010VB3XLEAX	2145710

	Brief description	Type	part no.
	• Application: Zones with chemicals, Uncontaminated zones • 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 • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones	YF2A14-C60VB3XLEAX	2145707
	• 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 • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones	YF2A14-010VB3XLEAX	2145708

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.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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