



KT2R-2B3721

KT2

CONTRAST SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
KT2R-2B3721	1016114

Other models and accessories → www.sick.com/KT2

Detailed technical data

Features

Housing design	Middle
Dimensions (W x H x D)	15 mm x 49 mm x 41.5 mm
Light source	LED, visible red light ¹⁾
Light spot size	Ø 2 mm
Wave length	660 nm
Sensing distance	≤ 13.5 mm
Sensing distance tolerance	± 2 mm
Adjustment	Potentiometer
Output function	Light/dark switching

¹⁾ Average service life: 100,000 h at $T_U = +25\text{ °C}$.

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	PNP NPN
Switching output (voltage)	PNP: HIGH = $V_S - \le 3\text{ V}$ / LOW = approx. 0 V NPN: HIGH = approx. V_S / LOW ≤ 1.5 V
Switching mode	Light/dark switching

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⁾ Reference voltage DC 50 V.

Output current I_{\max}.	100 mA
Input, light/dark (L/D)	PNP Light: $U = 0\text{ V}$ Dark: $U = 10\text{ V} \dots < U_V$ NPN Light: $U = U_V$ Dark: $U = 0\text{ V}$
Time delay	20 ms none
Protection class	II ⁵⁾
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	Plug, M12, 5-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⁾ Reference voltage DC 50 V.

Mechanics

Housing material	Zinc diecast
Weight	120 g

Ambient data

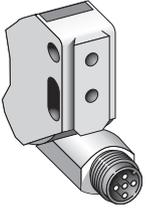
Ambient operating temperature	-10 °C ... +55 °C
Ambient temperature, storage	-20 °C ... +75 °C
Shock load	According to IEC 60068
Enclosure rating	IP67
UL File No.	NRKH.E181493 & NRKH7.E181493

Classifications

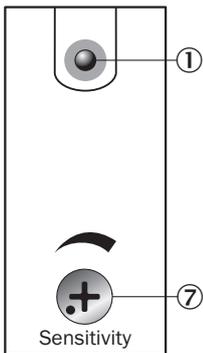
ECLASS 5.0	27270906
ECLASS 5.1.4	27270906
ECLASS 6.0	27270906
ECLASS 6.2	27270906
ECLASS 7.0	27270906
ECLASS 8.0	27270906
ECLASS 8.1	27270906
ECLASS 9.0	27270906
ECLASS 10.0	27270906
ECLASS 11.0	27270906
ECLASS 12.0	27270906
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820

ETIM 8.0	EC001820
UNSPSC 16.0901	39121528

Pinouts

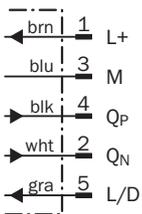


Adjustments

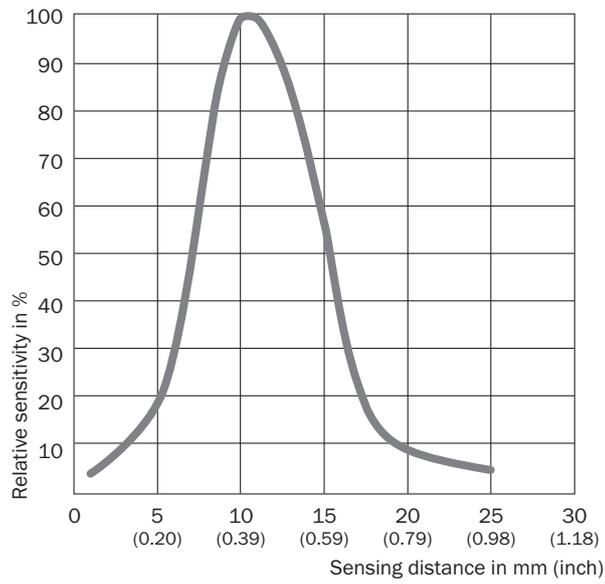


- ① LED signal strength indicator
- ⑦ sensitivity control

Connection diagram



Sensing distance



Recommended accessories

Other models and accessories → www.sick.com/KT2

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Description: Mounting bracket, large Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W11-2, W12-3, W16 	BEF-WG-W12	2013942
	<ul style="list-style-type: none"> Description: Mounting bracket, small Material: Stainless steel Details: Stainless steel Items supplied: Mounting hardware included Suitable for: W11-2, W12-3, W16 	BEF-WK-W12	2012938
	<ul style="list-style-type: none"> Description: Clamping block for dovetail mounting Material: Aluminum Details: Aluminum (anodised) Items supplied: Mounting hardware included Suitable for: W11-2, W12-3 	BEF-KH-W12	2013285
	<ul style="list-style-type: none"> Description: Plate D for universal clamp bracket Material: Steel Details: Steel, zinc coated Items supplied: Universal clamp (2022726), mounting hardware Usable for: W12-2 Laser, W11-2, W12-3, UC12, P250, KT2, DT2 	BEF-KHS-D01	2022461

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² 	DOS-1205-G	6009719
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² 	DOS-1205-W	6009720
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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

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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