



KTL10W-N15 KT10

CONTRAST SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
KTL10W-N15	1023498

Other models and accessories → www.sick.com/KT10

Detailed technical data

Features

Dimensions (W x H x D)	30.4 mm x 53 mm x 80 mm
Sensing distance	Dependent on the fiber-optic cable
Sensing distance tolerance	Dependent on the fiber-optic cable
Housing design	Rectangular
Light source	LED, RGB
Wave length	470 nm, 525 nm, 640 nm
Light spot size	0.8 mm x 4 mm
Adjustment	Teach-in button
Teach-in mode	Dynamic teach-in (min/max)
Function	Deactivation delay ... 20 ms

Mechanics/electronics

Supply voltage	12 V DC ... 30 V DC ¹⁾
Ripple	$\leq 5 \text{ V}_{\text{pp}}$ ²⁾
Current consumption	$< 150 \text{ mA}$ ³⁾
Switching frequency	25 kHz ⁴⁾
Response time	20 μs ⁵⁾
Jitter	$< 10 \mu\text{s}$
Switching output	NPN
Switching output (voltage)	NPN: HIGH = approx. U_V / LOW $\leq 2 \text{ V}$

¹⁾ Limit values.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Signal transit time with resistive load.

⁶⁾ ET > 2 ms.

⁷⁾ AT > 200 μs .

⁸⁾ Reference voltage DC 50 V.

Output current $I_{max.}$	100 mA
Input, teach-in (ET)	NPN Teach: $U < 2 \text{ V}$ Run: $U = 10 \text{ V} \dots < U_V$ ⁶⁾
Input, blanking input (AT)	NPN Blanked: $U < 2 \text{ V}$ Free-running: $U > 10 \text{ V} \dots < U_V$ ⁷⁾
Retention time (ET)	25 ms, non-volatile memory
Connection type	Male connector M12, 5-pin
Protection class	II ⁸⁾
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP67
Weight	400 g
Housing material	Metal, zinc diecast

1) Limit values.

2) May not exceed or fall below U_V tolerances.

3) Without load.

4) With light/dark ratio 1:1.

5) Signal transit time with resistive load.

6) ET > 2 ms.

7) AT > 200 μs .

8) Reference voltage DC 50 V.

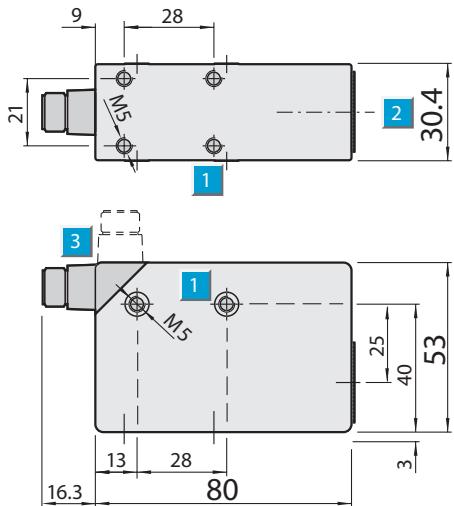
Ambient data

Ambient operating temperature	-10 °C ... +60 °C
Ambient temperature, storage	-10 °C ... +75 °C
Shock load	According to IEC 60068
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

Dimensional drawing



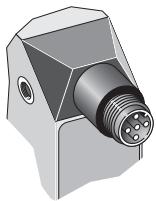
Dimensions in mm (inch)

- ① M5 threaded mounting hole, 5.5 mm deep
- ② lens (light emission)
- ③ M12 male connector, 5-pin, rotatable
- ④ Operating indicator, green
- ⑤ Teach-in button
- ⑥ Function indicator output and teach-in, yellow
- ⑦ program selector switch

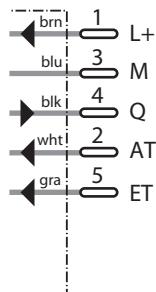
Adjustments



Pin assignment



Connection diagram



Recommended accessories

Other models and accessories → www.sick.com/KT10

	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: 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

	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 Application: Zones with chemicals, Uncontaminated zones 	YG2A15-030VB5XLEAX	2145575

	Brief description	Type	part no.
	<ul style="list-style-type: none">Application: Zones with chemicals, Uncontaminated zonesConnection type head A: Female connector, M12, 5-pin, straight, A-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 0.6 m, 5-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: 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-codedConnection type head B: Flying leadsSignal type: Sensor/actuator cableCable: 3 m, 5-wire, PVCDescription: Sensor/actuator cable, unshieldedApplication: 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."

WORLDWIDE PRESENCE:

Contacts and other locations www.sick.com