KTL5W-2P16

KT5

CONTRAST SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
KTL5W-2P16	1026006

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, RGB [1]
Wave length	640 nm, 525 nm, 470 nm
Sensing distance	Dependent on the fiber-optic cable
Adjustment	Teach-in button
Teach-in mode	Static 2-point teach-in
Output function	Light/dark switching

[1] Average service life: 100,000 h at T_U = +25 °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
Switching output (voltage)	PNP: HIGH = U_V ≤ 2 V / LOW approx. 0 V
Switching mode	Light/dark switching
Output current $I_{max.}$	100 mA
Input, teach-in (ET)	PNP Teach: U = 10 V ... < U_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] Reference voltage DC 50 V.

Input, light/dark (L/D)	Run: U < 2 V PNP Light: U = 0 V Dark: U > 10 V ... < U_V
Retention time (ET)	25 ms, non-volatile memory
Time delay	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	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 KTL5-2 Fiber Optic
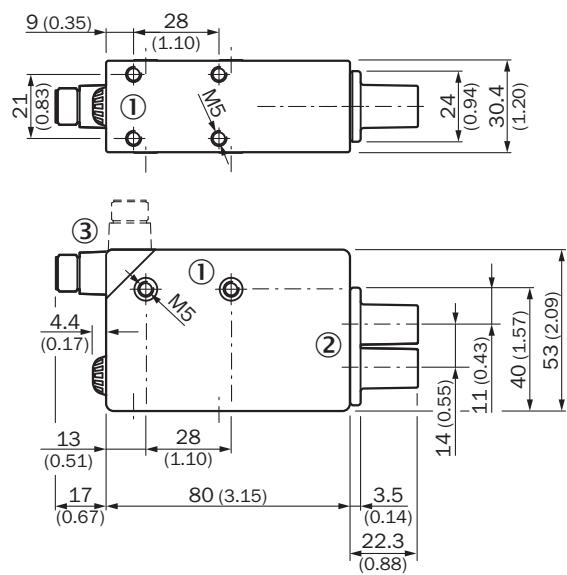
Dimensions in mm (inch)
① M5 threaded mounting hole, 5.5 mm deep
② Fiber-optic adapter (M12 x 1 internal thread)
③ Connector M12 (rotatable up to 90°)

Adjustments KTL5-2 Fiber Optic, KTL5W-xxx6
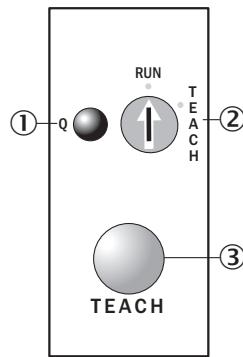
① Function signal indicator (yellow)
② Pre-selection switch
③ Teach-in button

Connection diagram Cd-323

BN	1	+(L+)
BK	4	Q
BU	3	-(M)
WH	2	Not connected
GY	5	Teach
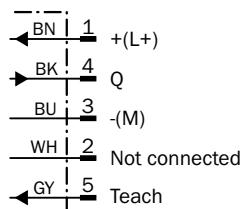
Concept of operation Teach-in static

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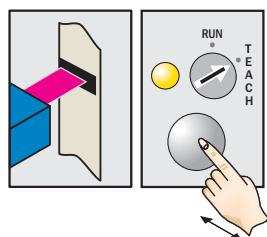
Turn rotary switch to "Teach" position. Press and hold teach-in button > 1 s.
Red emitted light and yellow LED flash.

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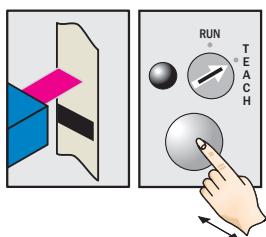
Press and hold teach-in button > 1 s.
Yellow LED goes out.

Example (for both settings)

Dark switching

Internal signal received
Switching threshold
Output Q

Light switching

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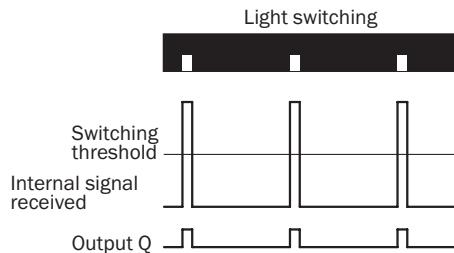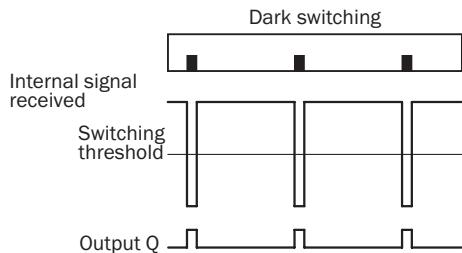
Switching characteristics
The optimum emitted light is selected automatically.
Light/dark setting is defined using teach-in sequence.
The switching threshold is set in the center between the background and the mark.
Teach-in can also be performed using an external control signal.

Sensing distance
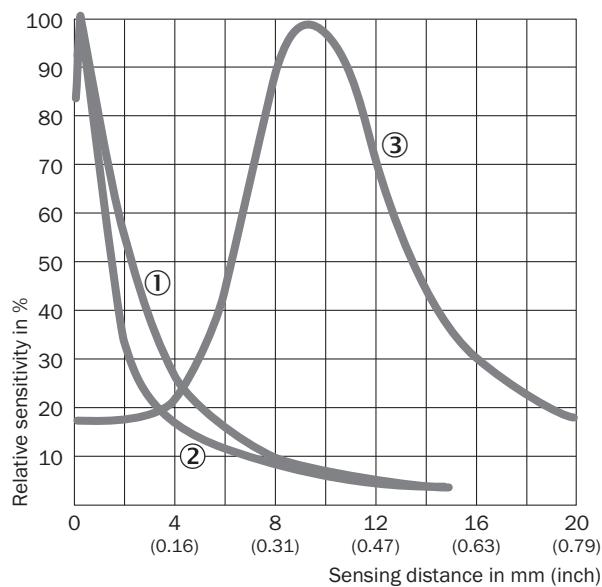
① Fiber-optic cable LBST 32900
② Fiber-optic cable LBSR 32900
③ Fiber-optic cable OCSL
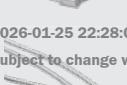
Recommended accessories

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

Brief description	Type	part no.
fiber-optic sensors		
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LIST32900	7020045
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Proximity system • **Fiber length:** 900 mm	LBST32900	7020046
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LISF32900	7020037
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Proximity system • **Fiber length:** 900 mm	LBSF32900	7020038
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LISAT32900	7020035
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Proximity system • **Fiber length:** 900 mm	LBSAT32900	7020036
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LISTA32900	7020047
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Proximity system • **Fiber length:** 900 mm	LBSTA32900	7020048
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LISA32900	7020039
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Proximity system • **Fiber length:** 900 mm	LBSA32900	7020040
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LISR32900	7020041
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Proximity system • **Fiber length:** 900 mm	LBSR32900	7020042
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LISR16900	7020049
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Proximity system • **Fiber length:** 900 mm	LBSR16900	7020050
• **For fiber optic amplifiers:** WLL260 • **Functional principle:** Through-beam system • **Fiber length:** 900 mm	LISR40900	7020051

	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:** ≤ 0.75 mm²	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:** ≤ 0.75 mm²	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 • **Application:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals • **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:** Uncontaminated zones, Zones with chemicals	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:** Uncontaminated zones, Zones with chemicals	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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