



Contrast sensors
KT8, KT8 CAN

KT8W-P121C



Model Name > [KT8W-P121C](#)
Part No. > [1043689](#)



At a glance

- The CAN interface helps set parameters, process documentation and adaptation
- Automatic drift correction
- Fast response time
- Precise light spot
- 3-color RGB LED technology
- Two interchangeable light exits

Your benefits

- Easy integration into machine designs due to standard CAN protocol
- Access to the sensor via the control system saves the machine operator time and effort during configuration
- Individual, application-specific configuration and settings
- Automatic drift correction ensures high production reliability with faded print marks and other difficult-to-detect marks
- Reliable operation, even with high-gloss reflective surfaces
- Long-lasting, tough metal housing



Features

Sensing distance ¹⁾ :	20 mm
Sensing distance tolerance:	± 3 mm
Light source ²⁾ :	LED
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 ³⁾ :	Vertical
Function:	Deactivation delay, 10 ms/20 ms/40 ms, adjustable, Automatic drift correction, CAN interface
Type of light:	Visible blue light, Visible green light, Visible red light
Dimensions (W x H x D):	30.4 mm x 53 mm x 80 mm
Housing design (light emission):	Rectangular
Teach-in mode:	Static 2-point teach-in, Dynamic teach-in (min/max)

¹⁾ From front edge of lens ²⁾ Average service life of 100,000 h at T_A = +25 °C ³⁾ In relation to long side of housing

Mechanics/electronics

Ripple ¹⁾ :	≤ 5 Vpp
Power consumption ²⁾ :	< 120 mA

Switching frequency ³⁾ :	22.5 kHz
Response time ⁴⁾ :	22 μ s
Jitter:	< 11 μ s
Output type:	PNP: HIGH = VS- \leq 2 V / LOW approx. 0 V
Switching mode:	PNP
Input, teach-in (ET):	PNP:, Run: U < 2 V, Teach: U = 10 V ... < U _V
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Male connector M12, 8-pin
Protection class ⁵⁾ :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	400 g
Housing material:	Metal, Zinc diecast
Output current I _{max.} :	100 mA
Supply voltage:	10 V DC ... 30 V DC ⁶⁾
Fieldbus interface:	-

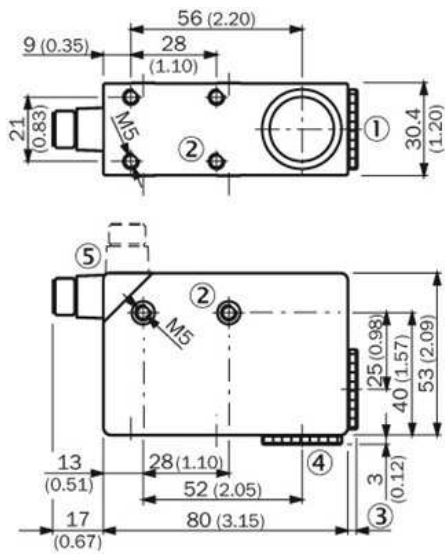
¹⁾ May not exceed or fall short of V_S tolerances ²⁾ Without load ³⁾ With light/dark ratio 1:1 ⁴⁾ Signal transit time with resistive load ⁵⁾ Reference voltage DC 32 V ⁶⁾

Limit values; operation in short-circuit protected network max. 8 A

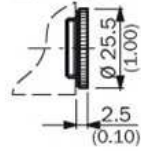
Ambient data

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

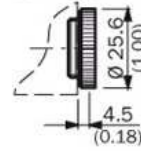
Dimensional drawing



Sensing distance
10 mm (0.39 inch)

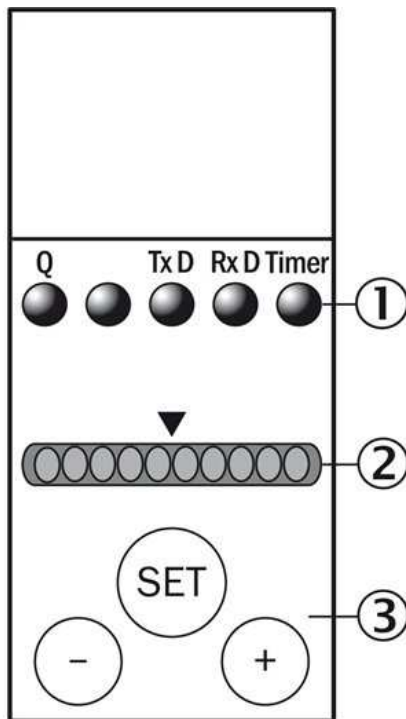


Sensing distance
20 mm (0.79 inch)



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

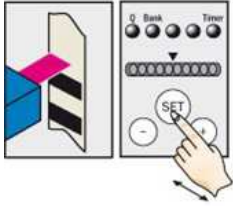
Adjustments



- |1| Function signal indicators (yellow)
- |2| Bar graph (green)
- |3| Teach-in button/"+" and "-" button

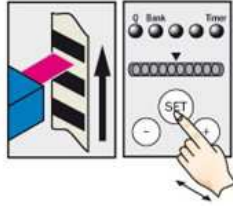
Connection type and diagram

1. Position background

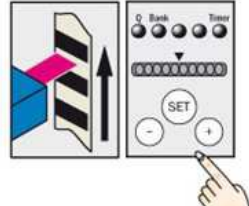


Press and hold SET button.
Emitted light turns white.

2. Move at least one repeat length using the light spot



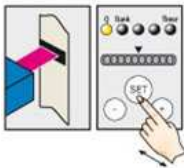
Hold down SET button.



Release SET button.

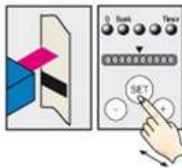
Bedienhinweis

1. Position mark



Press and hold SET button > 1 s.
Yellow LED flashes.

2. Position background



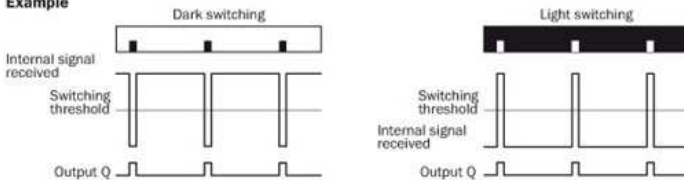
Press and hold SET button > 1 s.
Yellow LED goes out.

Note

The bar display visualizes the detection reliability during teach-in. The more LEDs that illuminate, the better the teach-in:

- 1 LED illuminates = operation not reliable – contrast difference too low
- ≤ 4 LEDs illuminate = operation OK – sufficient contrast difference
- > 4 LEDs illuminate = reliable operation – high contrast difference

Example

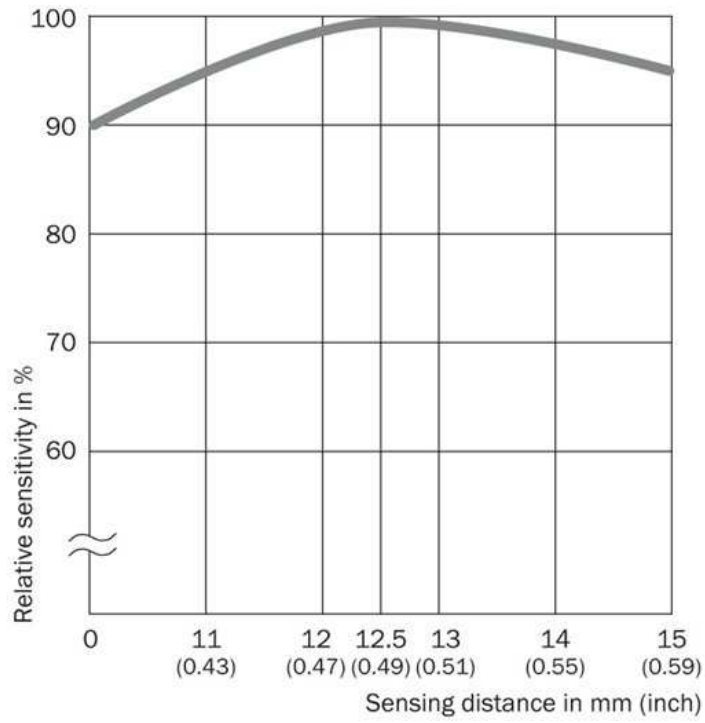


Switching characteristics

Standard setting via control panel or CAN.

Device configuration only possible via CAN, cf. operating instructions.

Sensing distance



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