



Contrast sensors
KT10, KT10-2

KT10W-2N1115S04



Model Name > [KT10W-2N1115S04](#)
Part No. > [1056313](#)



At a glance

- Very low jitter (< 10 µs)
- Precise light spot
- Best contrast resolution thanks to RGB LED technology
- Two interchangeable light exits
- Five storage banks for settings
- Automatic drift correction
- Fast switching frequency of 25 kHz
- Easy-to-read bar graph display

Your benefits

- Very precise detection of print marks enables optimal results for packaging and printing applications
- All contrast marks, even pale yellow on white paper, can be reliably detected thanks to RGB LED technology
- Automatic drift correction helps detect difficult to see marks, such as faded print marks, enabling higher production reliability
- Reliable operation, even with high-gloss reflective surfaces, increasing throughput
- Simple teach-in via an external signal can be performed while the material is moving, enabling shorter setup time
- Long-lasting, tough metal housing



Features

Sensing distance ¹⁾ :	10 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:	0.6 mm x 2 mm
Light spot direction ³⁾ :	Vertical
Function:	Automatic drift correction
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⁾ :	25 kHz
Response time ⁴⁾ :	20 μs
Jitter:	< 10 μs
Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V
Switching mode:	NPN
Input, teach-in (ET):	NPN: U = 10 V ... < U _V , Teach: U < 2 V
Input, light/dark (L/D):	Dark: U = 0 V, Light: U = U _V , NPN:
Retention time (ET):	25 ms, non-volatile memory
Time delay:	20 ms, adjustable
Connection type:	Connector M12, 5-pin
Protection class ⁵⁾ :	II
Circuit protection:	Output Q short-circuit protected, Outputs overcurrent and 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:	-

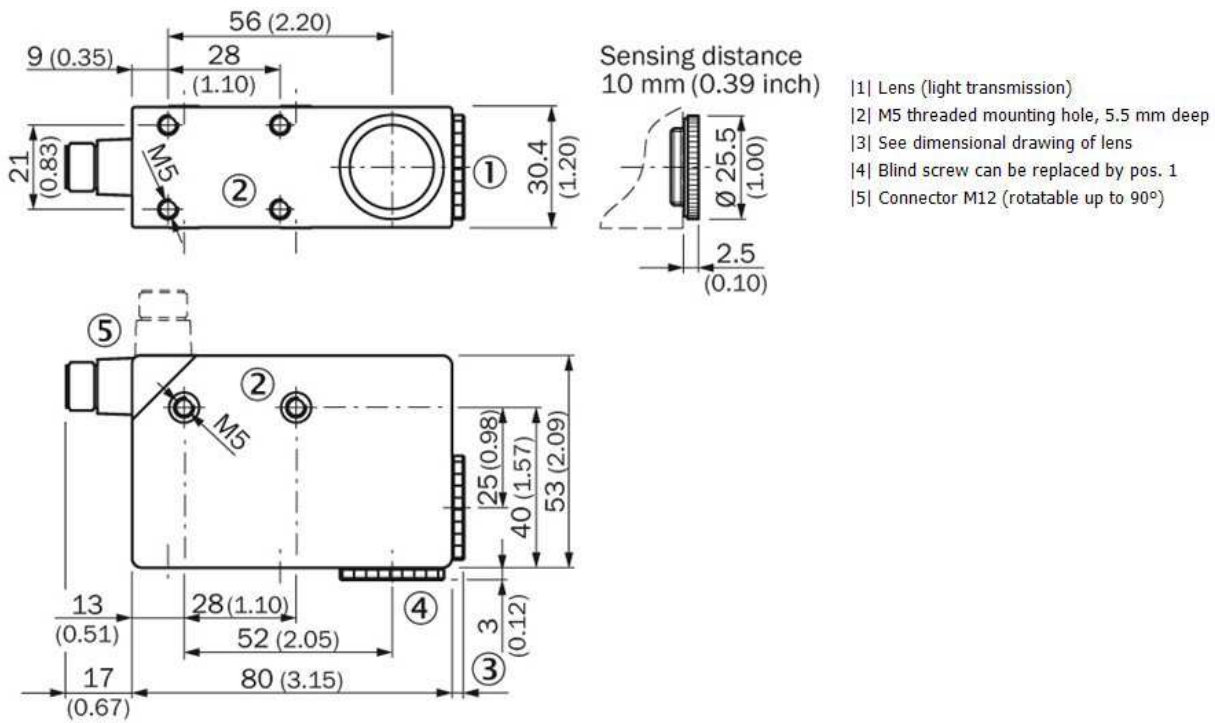
¹⁾ May not exceed or fall short of V_S tolerances ²⁾ Without load ³⁾ With light/dark ratio 1:1 ⁴⁾ Signal transit time with resistive load ⁵⁾ Reference voltage DC 50 V ⁶⁾

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

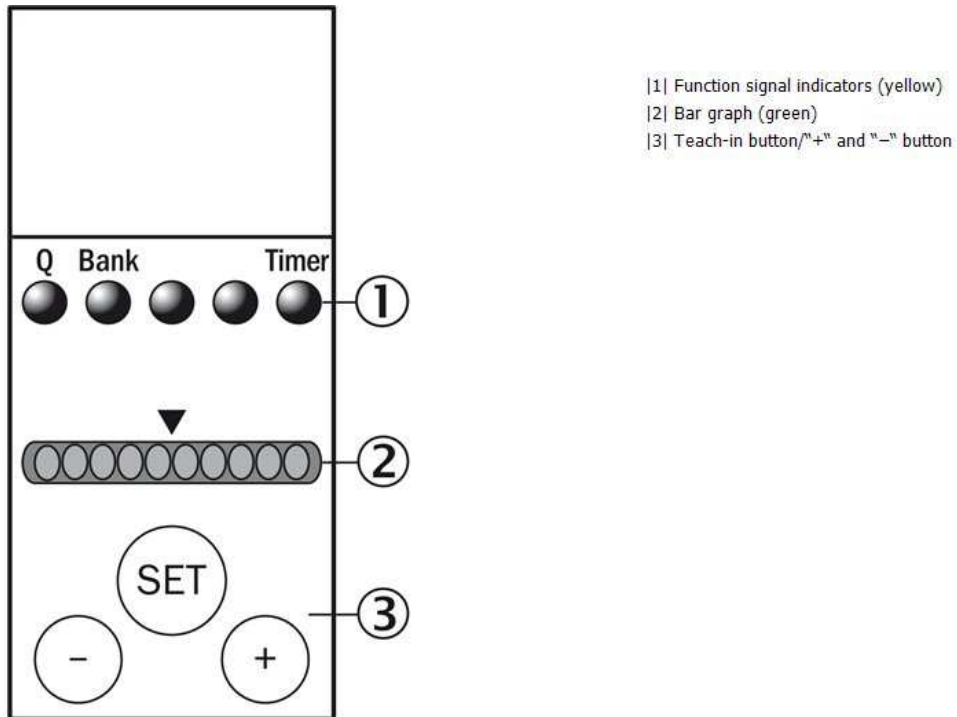
Ambient data

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

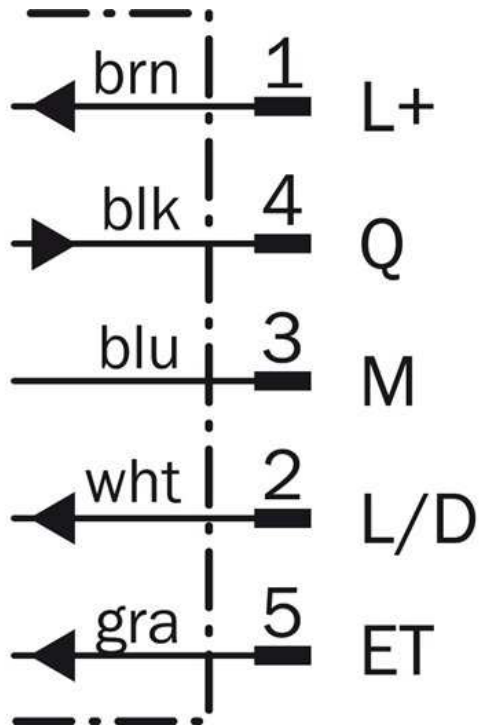
Dimensional drawing



Adjustments

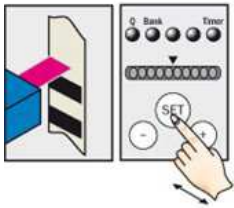


Connection diagram



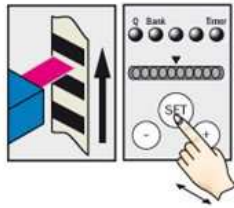
Bedienhinweis

1. Position background

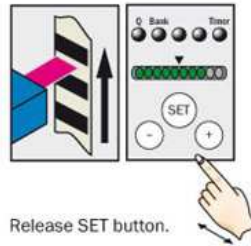


Press and hold SET button.
Emitted light turns white.

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

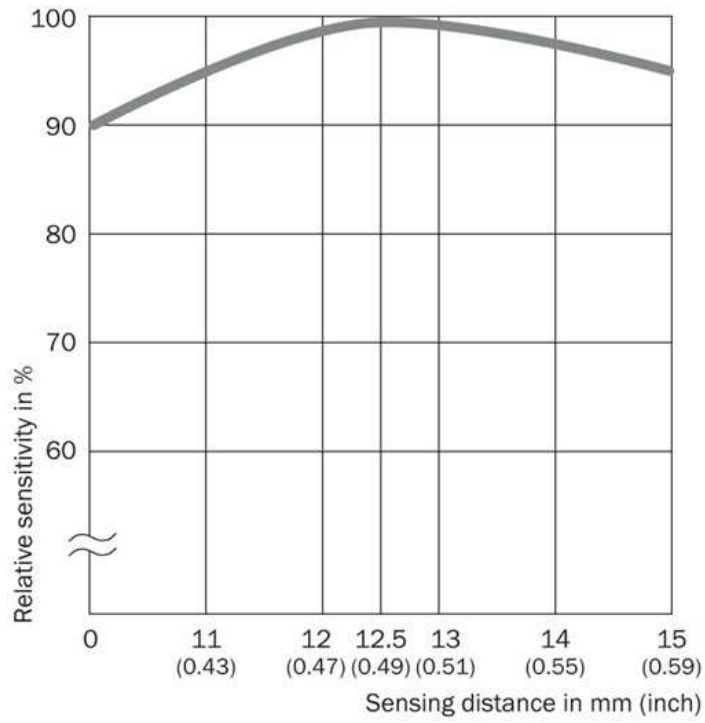


Hold down SET button.



Release SET button.

Sensing distance



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