



Contrast sensors
KT10, KT10

KTL10W-N15



Model Name > [KTL10W-N15](#)
Part No. > [1023498](#)



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:	Dependent on the fiber-optic cable
Sensing distance tolerance:	Dependent on the fiber-optic cable
Light source:	LED
Wave length:	470 nm, 525 nm, 640 nm
Light spot size:	Dependent on the fiber-optic cable
Function:	Deactivation delay ... 20 ms
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:	Dynamic teach-in (min/max)

Mechanics/electronics

Ripple ¹⁾ :	≤ 5 Vpp
Current consumption ²⁾ :	< 150 mA
Switching frequency ³⁾ :	25 kHz

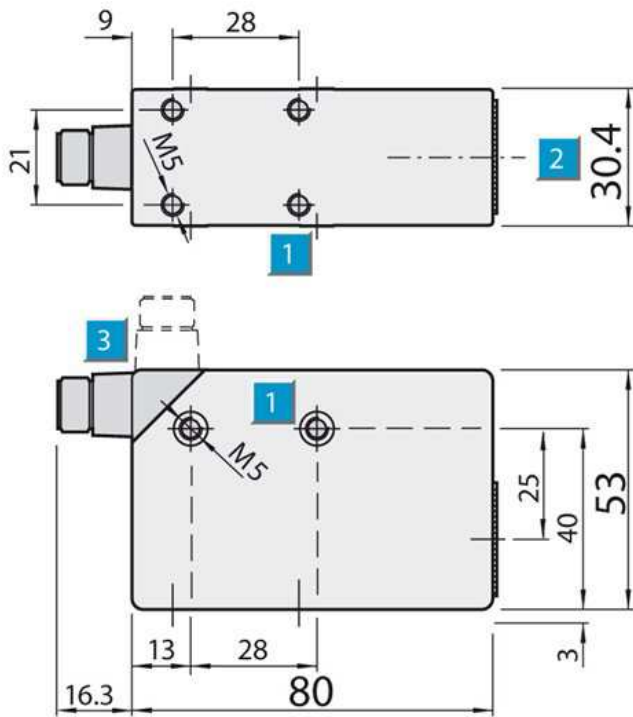
Response time ⁴⁾ :	20 μ s
Jitter:	< 10 μ s
Output type:	NPN: HIGH = approx. VS / LOW \leq 2 V
Switching mode:	NPN
Input, teach-in (ET) ⁵⁾ :	NPN:., Run: U = 10 V ... < U _V , Teach: U < 2 V
Input, blanking input (AT) ⁶⁾ :	Blanked: U < 2 V, Free-running: U > 10 V ... < U _v , NPN:
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 5-pin
Protection class ⁷⁾ :	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:	12 V DC ... 30 V DC ⁸⁾
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⁾ ET > 2 ms ⁶⁾ AT > 200 μ s ⁷⁾
Reference voltage DC 50 V ⁸⁾ Limit values

Ambient data

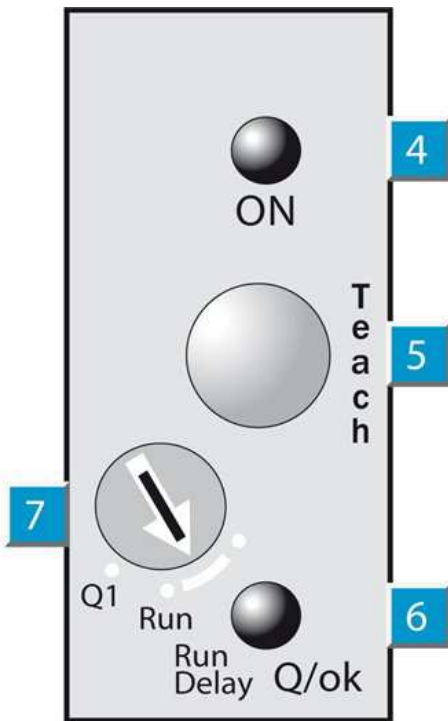
Shock load:	According to IEC 60068
UL File No.:	NRKH.E181493 & NRKH7.E181493
Ambient operating temperature:	-10 °C ... +60 °C
Ambient storage temperature:	-10 °C ... +75 °C

Dimensional drawing

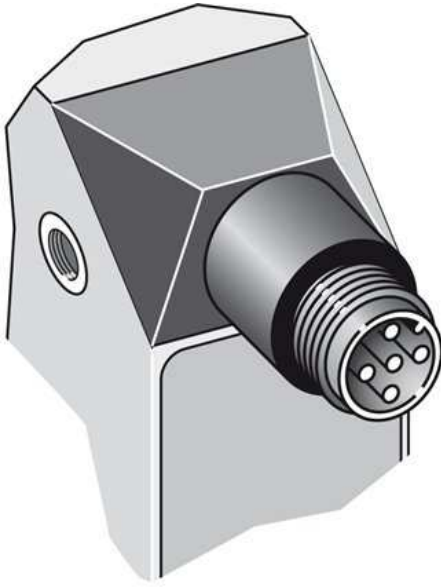


- [1] M5 threaded mounting hole, 5.5 mm deep
- [2] Lens (light transmission)
- [3] Connector M12, 5-pin rotatable
- [4] Operating indicator, green
- [5] Teach-in button
- [6] Function indicator output and teach-in, yellow

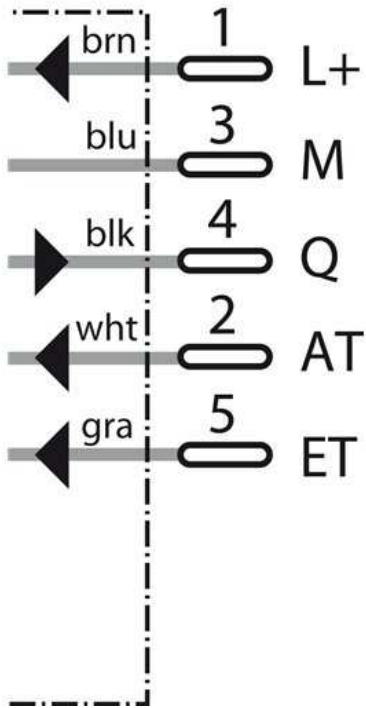
Adjustments



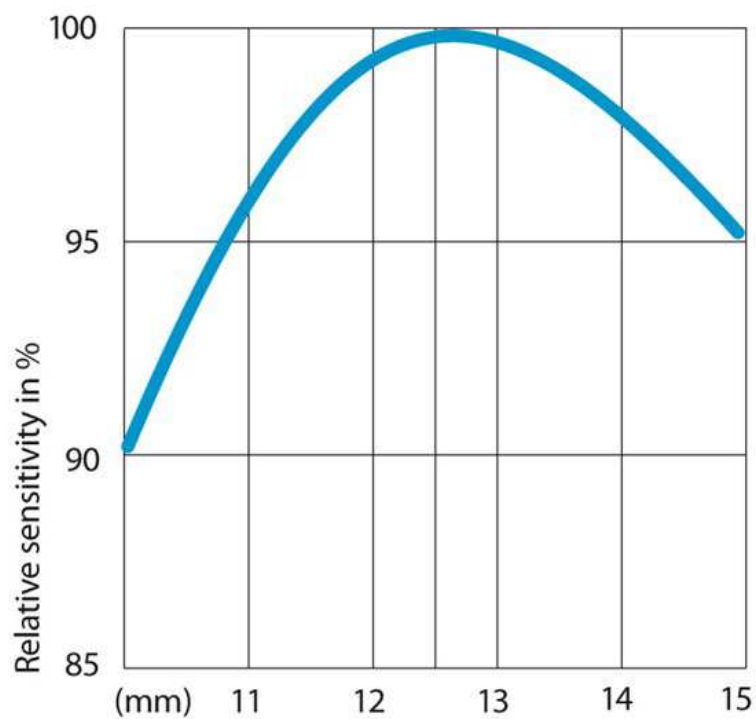
Connection type



Connection diagram



Characteristic curve



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