



Contrast sensors KT8, KT8L Laser

KT8L-N3756



Model Name > [KT8L-N3756](#)
Part No. > [1041352](#)



At a glance

- Wide range of operating distances between 30 mm and 800 mm
- Small and precise laser light spot (Class II)
- Fast switching frequency of 17 kHz
- Analog output
- Simple teach-in
- Detection reliability displayed in the bar graph display

Your benefits

- Wide range of applications with sensing distances up to 800 mm
- Precise detection of the smallest marks and objects, e.g., 1 x 1 mm²
- Adjusts itself to specific applications, opening up a wide range of uses
- Reliable operation, even with unsteady objects



Features

Dimensions (L x W x H):	80 mm x 30.4 mm x 53 mm
Sensing distance ¹⁾ :	150 mm
Light source ^{2), 3)} :	Laser diode red light
Light emission:	Long side of housing
Light spot size:	Ø 3 mm ⁴⁾
Light spot direction:	Round
Operating distance:	30 mm ... 600 mm ⁵⁾
Adjustment:	Static 2-point teach-in, Dynamic teach-in (min/max)
Function:	Automatic drift correction

¹⁾ From front edge of lens ²⁾ Average service life of 50,000 h at T_A = +25 °C ³⁾ Wave length: 655 nm ⁴⁾ At focal point = sensing distance 150 mm ⁵⁾ With respect to black-white contrast 6 % / 90 %

Mechanics/electronics

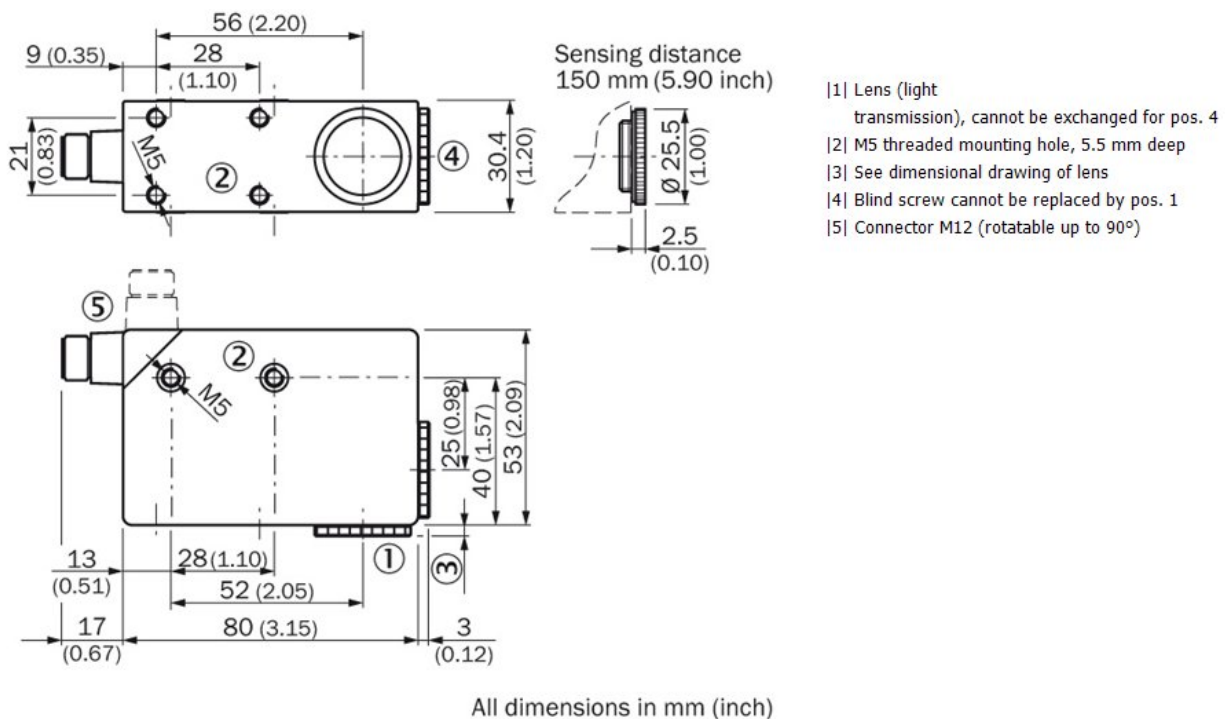
Supply voltage V _s ¹⁾ :	DC 10 V ... 30 V
Ripple ²⁾ :	≤ 5 Vpp
Power consumption ³⁾ :	< 80 mA
Switching frequency ⁴⁾ :	17 kHz
Response time ⁵⁾ :	30 µs
Jitter:	< 15 µs
Output type:	NPN: HIGH = approx. V _S / LOW ≤ 2 V
Switching mode:	NPN

Analog output QA:	0.3 mA ... 10 mA
Input, teach-in (ET):	NPN: Teach: $U < 2\text{ V}$ Run: $U = 10\text{ V} \dots < U_V$
Retention time (ET):	25 ms, non-volatile memory
Time delay:	20 ms, adjustable
Connection type:	Connector M12, 5-pin
Protection class ⁶⁾ :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	Ca. 400 g
Housing material:	Die-cast zinc
Output current I _{max} ·:	100 mA
¹⁾ Limit values: operation in short-circuit protected network max. 8 A	²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ With light/dark ratio 1:1 ⁵⁾
Signal transit time with resistive load ⁶⁾	Reference voltage DC 50 V

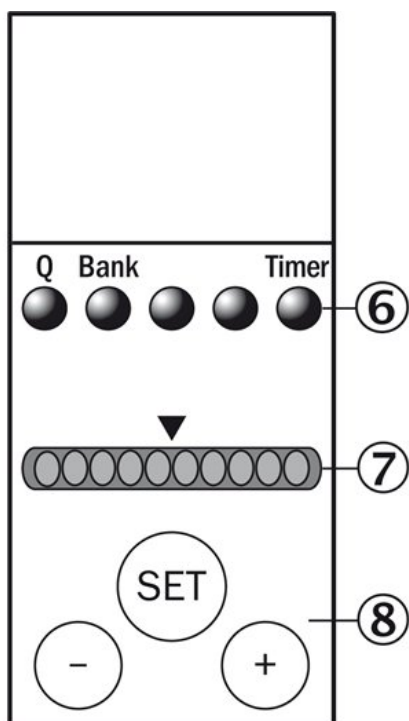
Ambient data

Ambient temperature:	Operation: -10 ... 45 °C Storage: -10 ... 75 °C
Shock load:	According to IEC 60068

Dimensional drawing

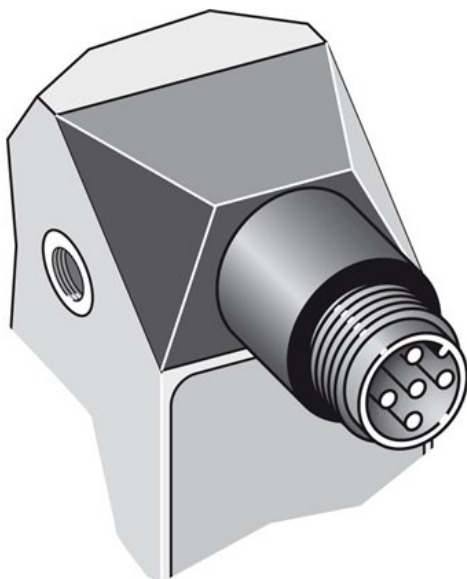


Adjustments

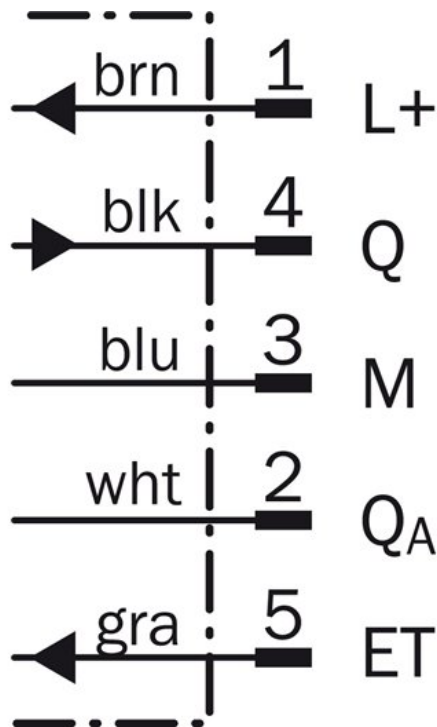


- |6| Function signal indicators (yellow)
- |7| Bar graph (green)
- |8| Teach-in button/"+" and "-" button

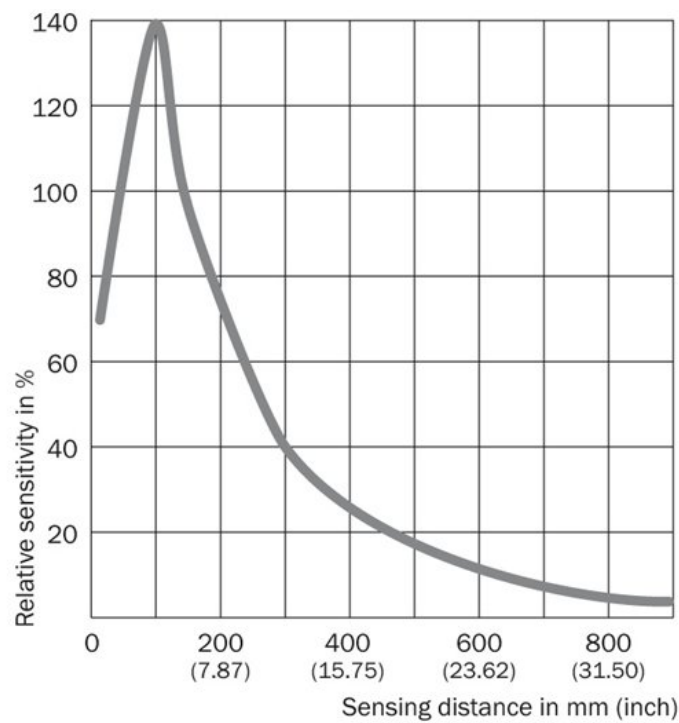
Connection type



Connection diagram



Sensing distance



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