



Contrast sensors KT3, KT3

KT3M-N1116



Model Name > [KT3M-N1116](#)
Part No. > [1044593](#)



At a glance

- Very small housing
- 3-color RGB technology or white LED
- Simple teach-in (when machine is stopped or during operation)
- Integrated switching threshold adjustment for high-gloss objects
- Reliable operation for jittering materials
- Switching frequency of 10 kHz

Your benefits

- Compact design fits in applications with limited space
- 3-color RGB technology enables universal operation with an extremely wide range of weak contrast combinations
- White LED model detects several different marks
- Simple teach-in to optimally set transmission color, switching point and surface shine
- Very good contrast resolution for detecting print marks, even where the variation between the mark and the background is minimal
- Automatic adaptation for high-gloss objects ensures high throughput
- Reliable operation for jittering materials
- Accurate positioning in rapid production processes



Features

Dimensions (L x W x H):	22 mm x 12 mm x 40 mm
Sensing distance:	12.5 mm
Sensing distance tolerance:	± 2 mm
Light source ¹⁾ , ²⁾ :	LED, white
Light spot size:	1.5 mm x 3.5 mm
Light spot direction ³⁾ :	Vertical
Adjustment:	Static 2-point teach-in

¹⁾ Average service life of 100,000 h at $T_A = +25\text{ °C}$ ²⁾ Wave length: 400 nm ... 700 nm ³⁾ In relation to long side of housing

Mechanics/electronics

Supply voltage V_s ¹⁾ :	DC 12 V ... 24 V
Ripple ²⁾ :	≤ 5 Vpp
Power consumption ³⁾ :	< 35 mA
Switching frequency ⁴⁾ :	10 kHz

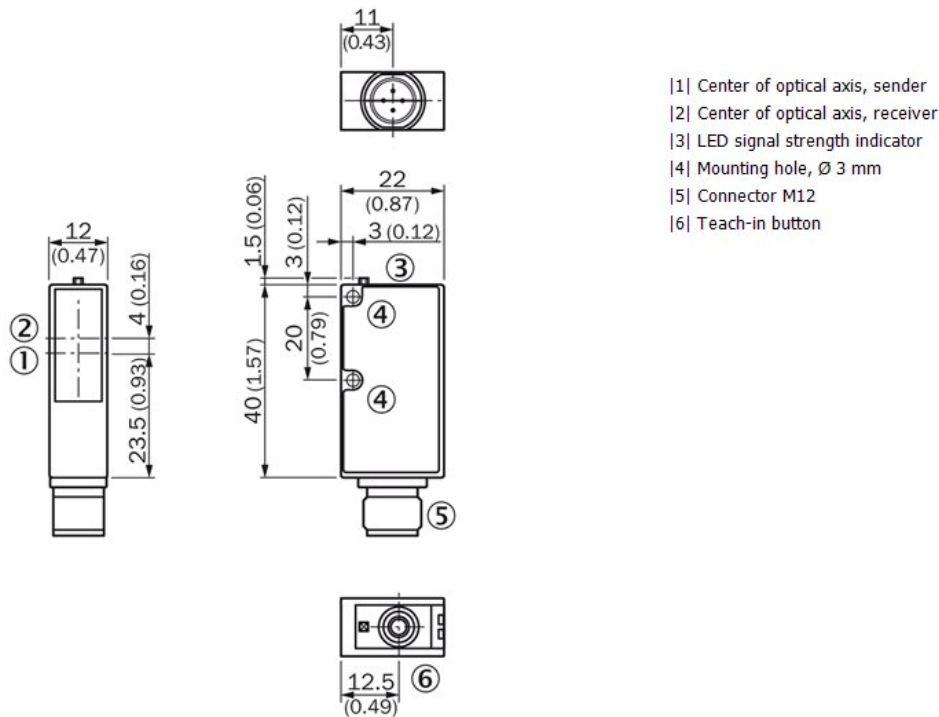
Response time ⁵⁾ :	50 µs
Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V
Switching mode:	NPN
Input, teach-in (ET):	NPN: Teach: U < 2 V Run: U = 10 V ... < U _V
Retention time (ET):	25 ms, non-volatile memory
Connection type:	Connector M12, 4-pin
Protection class ⁶⁾ :	II
Circuit protection:	Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	Ca. 11 g
Housing material:	ABS (plastic)
Output current I _{max} :	100 mA

¹⁾ Extreme values: 12 V (- 10 %) ... 24 V (+ 20 %). 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

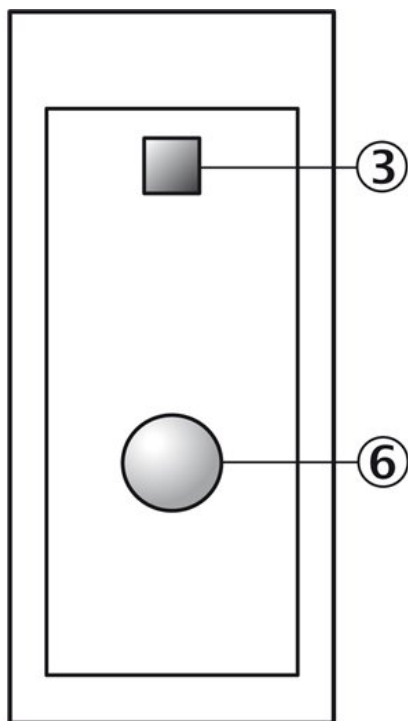
Ambient data

Ambient temperature:	Operation: -10 ... 55 °C Storage: -20 ... 75 °C
Shock load:	According to IEC 60068

Dimensional drawing

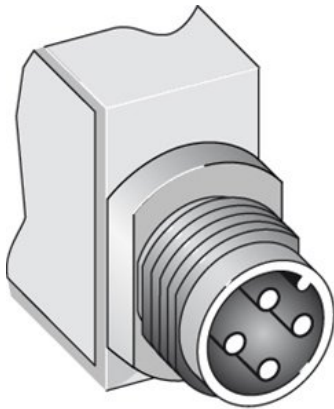


Adjustments

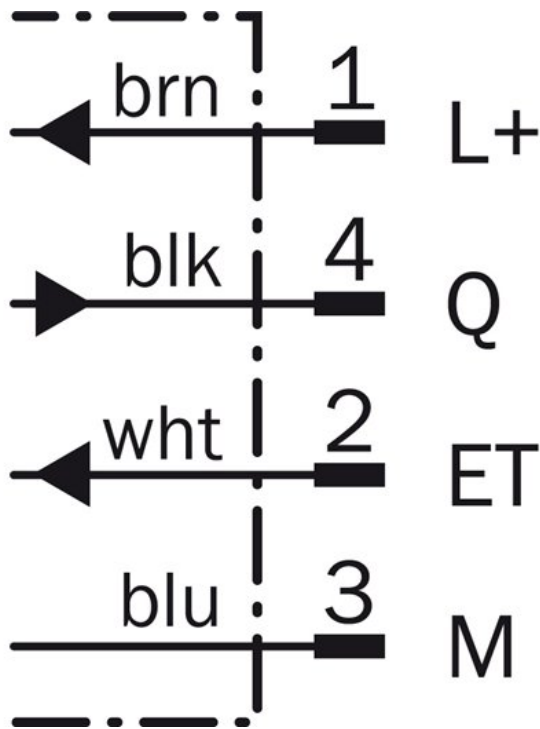


- |3| LED signal strength indicator
- |6| Teach-in button

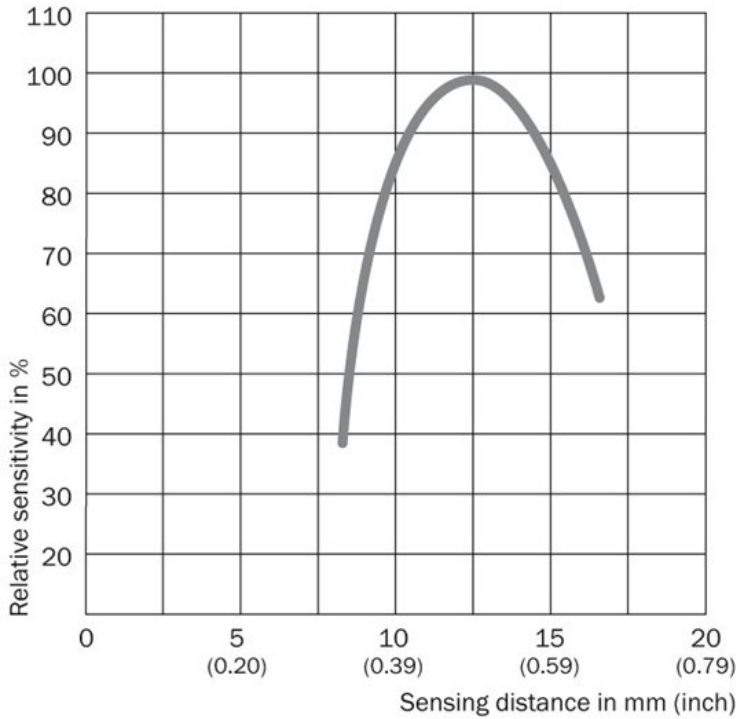
Connection type



Connection diagram



Sensing distance



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