



Contrast sensors
KT5, KT5-2 Potentiometer

KT5M-2N1111



Model Name > [KT5M-2N1111](#)
Part No. > [1048489](#)



At a glance

- Tough, metal housing
- Manual switching threshold adjustment with optical adjustment indicator
- Green or white LED technology
- Models with analog output
- Switching frequency of 10 kHz
- Various sensing distances and light spot directions
- M12 plug can be rotated 90°

Your benefits

- All standard print marks and contrasts are detected
- Reliable operation, even with jittering webs and high-gloss materials
- High positioning accuracy improves packaging quality
- Various sensing distances, light spot directions and light emissions make individual configuration and simple integration into the production process possible



Features

| | |
|--------------------------------------|--|
| Dimensions (L x W x H): | 80 mm x 30.4 mm x 53 mm |
| Sensing distance ¹⁾ : | 10 mm |
| Sensing distance tolerance: | ± 3 mm |
| Light source ^{2), 3)} : | LED, white |
| Light emission: | Long and short side of housing, exchangeable |
| Light spot size: | 1.2 mm x 4.2 mm |
| Light spot direction ⁴⁾ : | Vertical |
| Adjustment: | Manual adjustment, potentiometer |
| Output function: | Light/dark switching |

¹⁾ From front edge of lens ²⁾ Average service life of 100,000 h at T_A = +25 °C ³⁾ Wave length: 450 nm ... 650 nm ⁴⁾ In relation to long side of housing

Mechanics/electronics

| | |
|---|--|
| Supply voltage V _s ¹⁾ : | DC 10 V ... 30 V |
| Ripple ²⁾ : | ≤ 5 Vpp |
| Power consumption ³⁾ : | < 80 mA |
| Switching frequency ⁴⁾ : | 10 kHz |
| Response time ⁵⁾ : | 50 µs |
| Output type: | NPN: HIGH = approx. V _S / LOW ≤ 2 V |

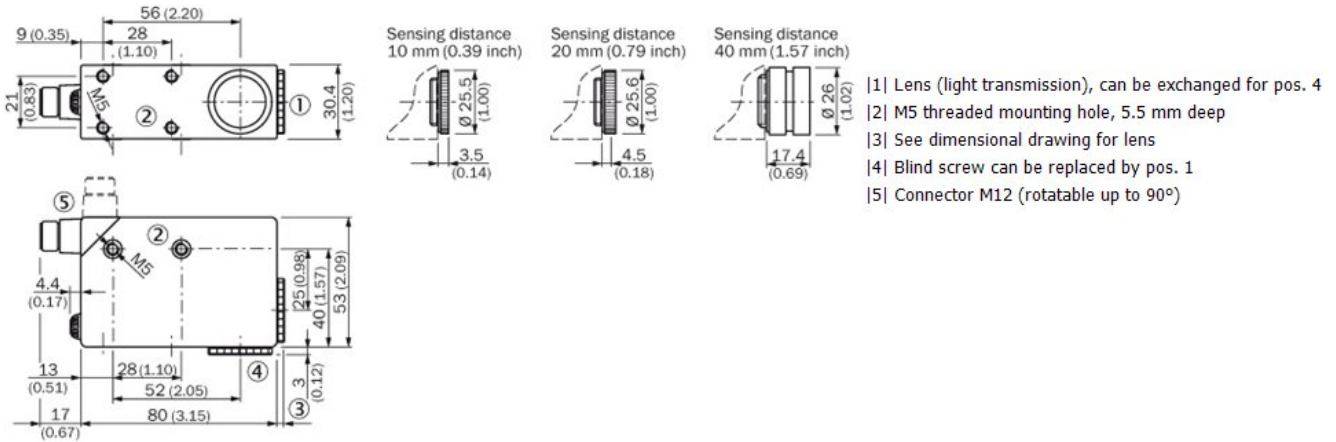
| | |
|------------------------------------|---|
| Switching mode: | NPN |
| Connection type: | Connector M12, 4-pin |
| Protection class ⁶⁾ : | II |
| Circuit protection: | Output Q short-circuit protected, Interference suppression, VS connections reverse-polarity protected |
| Enclosure rating: | IP 67 |
| Weight: | Ca. 400 g |
| Housing material: | Zinc diecast |
| 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 ... 55 °C, Storage: -25 ... 75 °C |
| Shock load: | According to IEC 60068 |
| UL File-No.: | UL No. NRKH.E181493 & cUL No. NRKH7.E181493 |

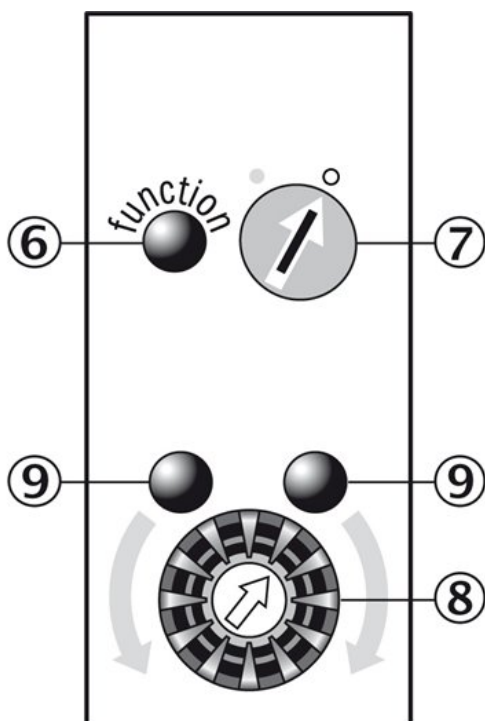
Dimensional drawing



- [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°)

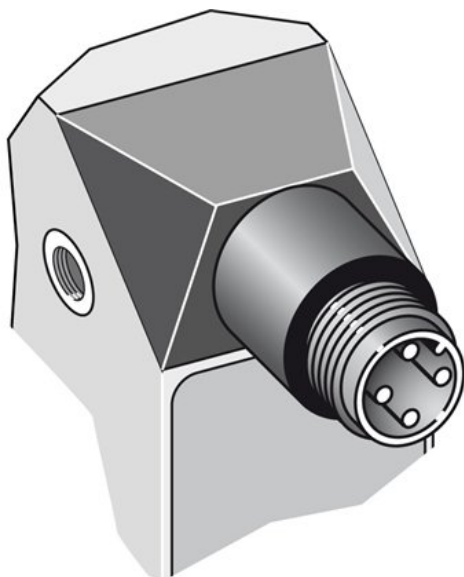
All dimensions in mm (inch)

Adjustments

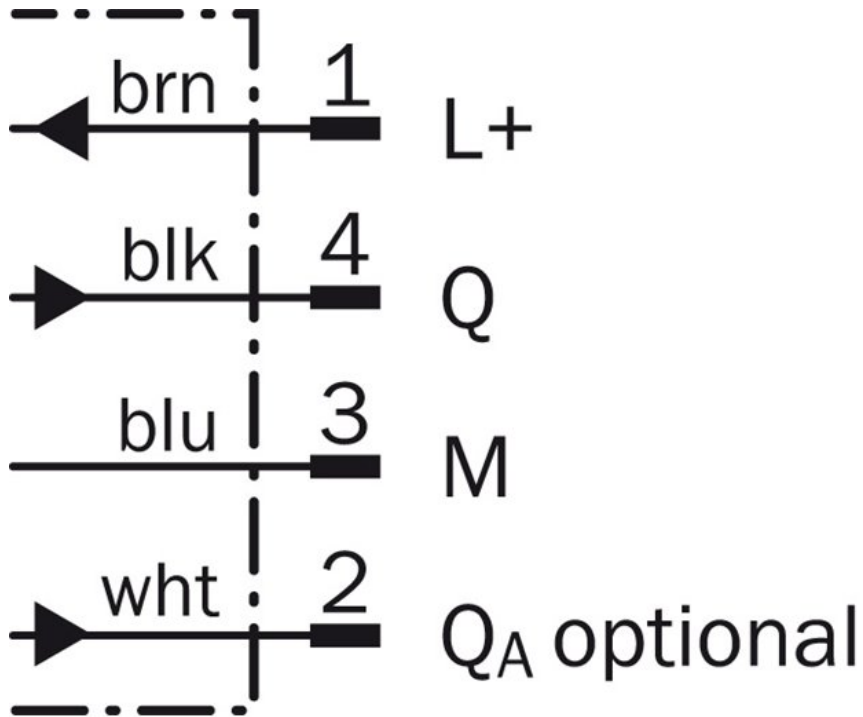


- |6| Function signal indicator (yellow)
- |7| Pre-selection switch (light/dark switching)
- |8| Switching threshold adjustment
- |9| Adjustment indicators (green)

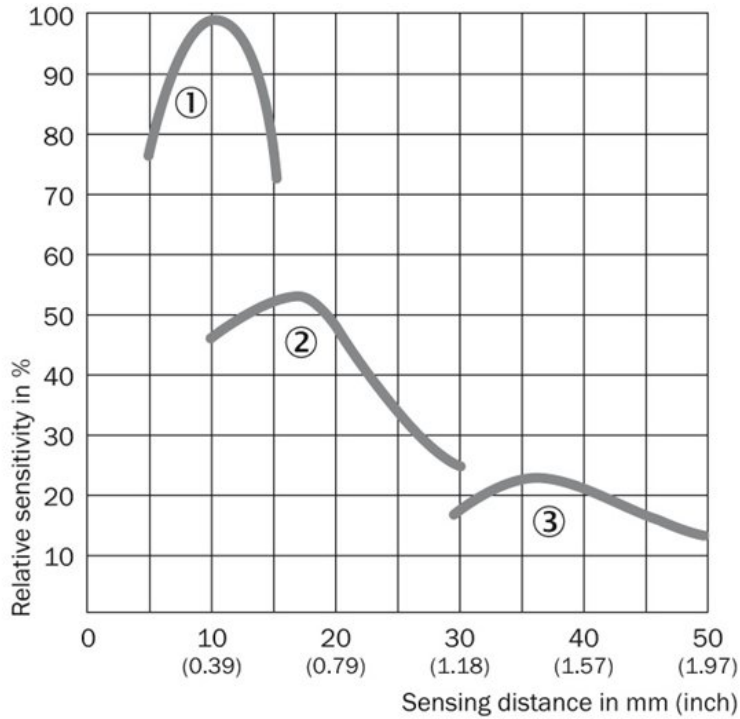
Connection type



Connection diagram



Sensing distance



- 1| Sensing distance 10 mm
- 2| Sensing distance 20 mm
- 3| Sensing distance 40 mm

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