SICK
Sensor Intelligence.

Contrast sensors
KT1M

Model Name > KT1M-P2
Part No. > 1027307

At a glance

- For detecting simple contrast differences, such as black marks on light backgrounds
- Small round housing with mounting accessories
- NPN and PNP models
- Light or dark switching functions
- Adjustment via potentiometer

Your benefits

- Cost-effective, application-specific sensor performance
- Quick and simple to integrate into machine designs
- LED indicator shows current operation status

Features

Sensing distance:	23.5 mm
Sensing distance tolerance:	± 1.5 mm
Light source [1), 2)]:	LED white
Light spot size:	(Ø 2 mm)
Adjustment:	Manual adjustment, potentiometer
Function:	Darkswitching

[1)] Average service life of 100,000 h at T_A = +25 °C [2)] Wave length: 450 nm ... 650 nm

Mechanics/electronics

Supply voltage VS [1)]:	DC 10 V ... 30 V
Ripple [2)]:	≤ 5 Vpp
Power consumption [3)]:	< 20 mA
Switching frequency [4)]:	400 Hz
Response time [5)]:	1.25 ms
Switching output:	PNP: HIGH = VS- ≤ 3 V/LOW = approx. 0 V
Switching mode:	PNP
Connection type:	Connector M12, 3-pin
Protection class [6)]:	II
Circuit protection:	Outputs overcurrent and short-circuit protected, Interference suppression, VS connections reverse-polarity protected
Enclosure rating:	IP 67
Weight:	ca. 7 g

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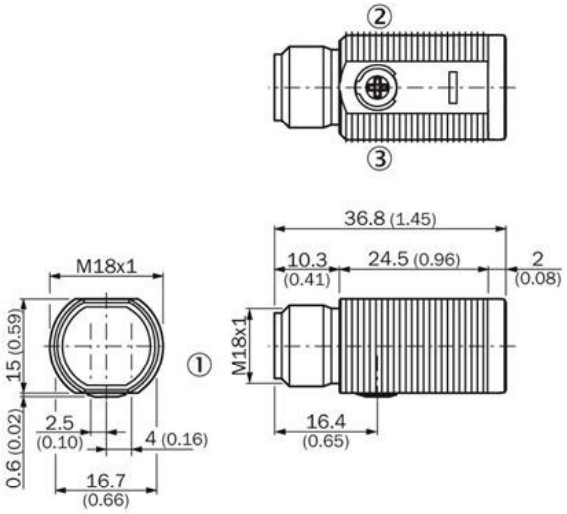
Housing material:	ABS (plastic), Optics: PMMA
Output current Imax.:	100 mA

[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 50 V DC

Ambient data

Ambient temperature:	Operation: -10 ... 55 °C Storage: -25 ... 70 °C
Shock load:	According to IEC 60068

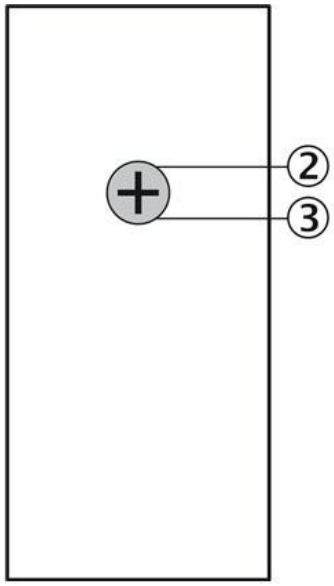
Dimensional drawing



|1| Connector M12
|2| Sensitivity adjustment 270°
|3| LED indicator yellow

All dimensions in mm (inch)

Adjustments



|2| Sensitivity adjustment 270°
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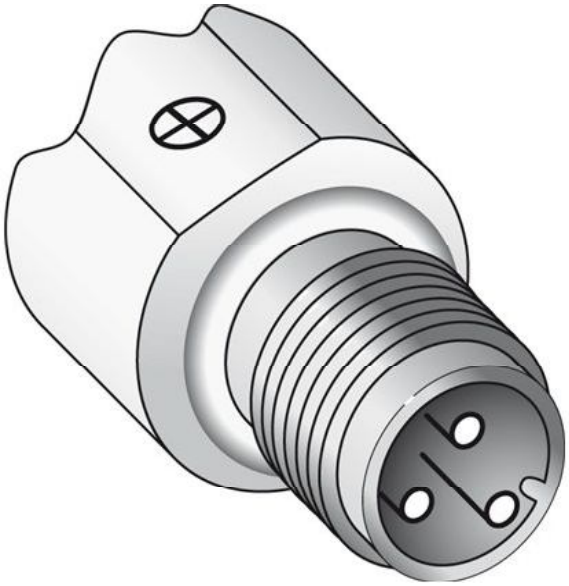
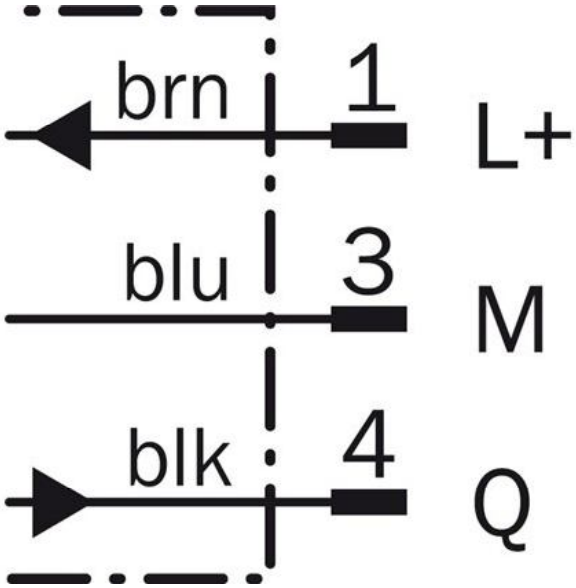
Connection type



Connection diagram



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