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DATA SHEET

# MF-R0608N141P10

MF
Fork sensors

SICK Sensor Intelligence



Illustration may differ

# FORK SENSORS

# MF-R0608N141P10

## ORDERING INFORMATION

| Type | part no. |
|---|---|
| MF-R0608N141P10 | 6090832 |

Further device versions and accessories at www.sick.com/MF

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| Mounting system type | R |
| Dimensions (W x H x D) | 13 mm x 21.3 mm x 13.7 mm |
| Fork width | 6 mm |
| Fork depth | 8 mm |
| Light source | LED, infrared |
| Minimum detectable object (MDO) | 0.8 mm |
| Repeatability | 0.01 mm |
| Display | Red LED indicator: Switching output $Q_L$ (Light ON) |
| Adjustment | None |

### ELECTRONICS

| | |
|---|---|
| Supply voltage | 5 V DC ... 30 V DC |
| Ripple | < 10 % |
| Current consumption | < 10 mA |
| Initialization time | 100 ms |
| Switching frequency | > 4 kHz |
| Response time | 100 µs |
| Jitter | 28 µs |
| Switching output | NPN [1] |
| Switching output (voltage) | High = $U_V$ - < 2 V / Low: ≤ 2 V |
| Switching mode | Light/dark switching [2] [3] |
| Switching output hysteresis | < 0.05 mm |

[1] Open Collector.

[2] Q1 = light switching.

[3] Q2 = dark switching.

| | |
|---|---|
| Output current $I_{max.}$ | 100 mA |
| Protection class | III |
| Circuit protection | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| Connection type | Cable open end, 4-wire |
| Connection type Detail | |
| Length of cable | 2 m |
| Cable material | PVC |
| Cable diameter | 2.7 mm |
| Conductor cross section | 0.08 mm² |
| Pinouts | |
| BN | + (L+) |
| WH | $Q_2$ (Dark ON) |
| BU | - (M) |
| BK | $Q_1$ (Light ON) |

[1] Open Collector.

[2] Q1 = light switching.

[3] Q2 = dark switching.

## MECHANICS

| | |
|---|---|
| Housing material | ABS |
| Weight | 22 g |

## AMBIENT DATA

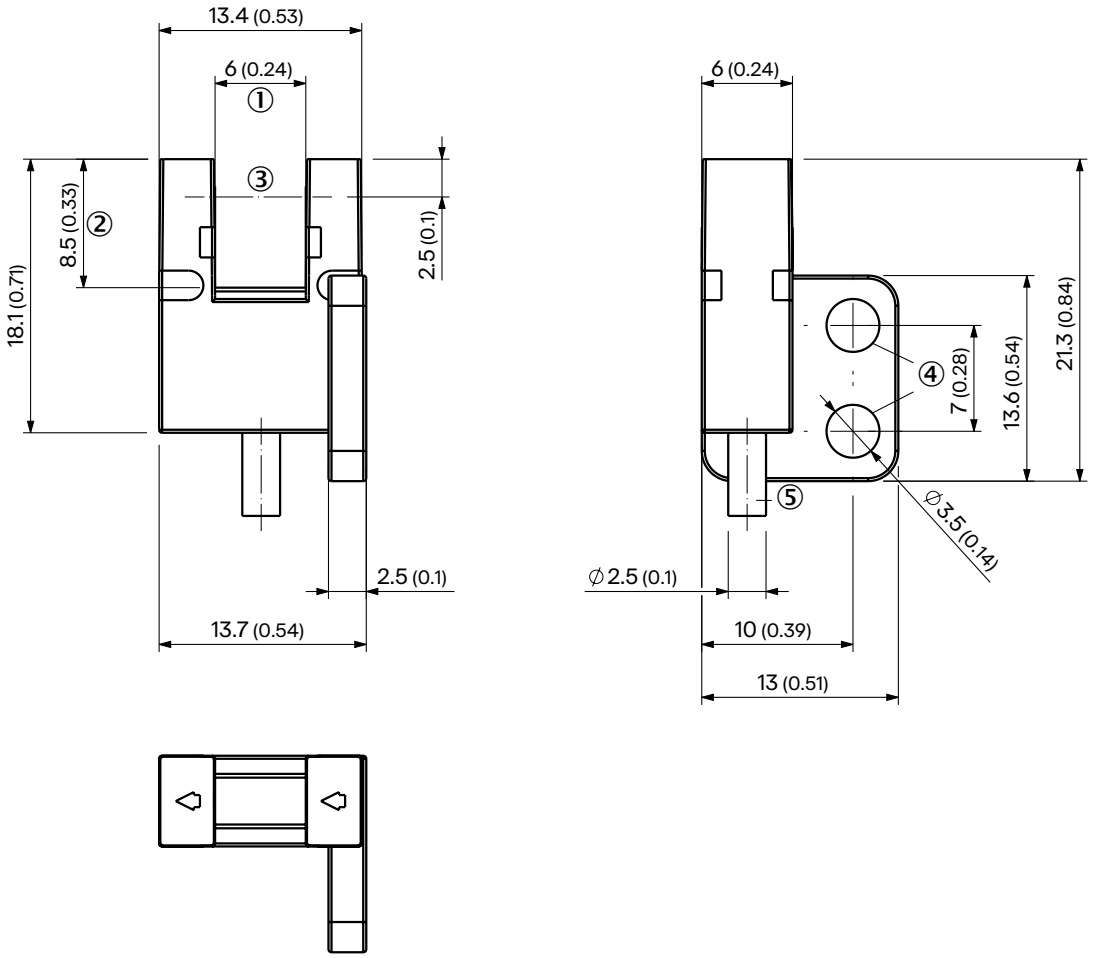
| | |
|---|---|
| Ambient operating temperature | –25 °C ... +55 °C |
| Ambient temperature, storage | –30 °C ... +80 °C |
| Shock load | According to EN 60068-2-27 |
| EMC | EN 60947-5-2 [1] |
| Enclosure rating | IP67 |

[1] The sensor complies with the Radio Safety Requirements (EMC) for the industrial sector (Radio Safety Class A). It may cause radio interference if used in a residential area.

## CERTIFICATES

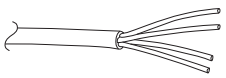
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |
| Photobiological safety (IEC EN 62471) | ✓ |

**DIMENSIONAL DRAWING, SENSOR**



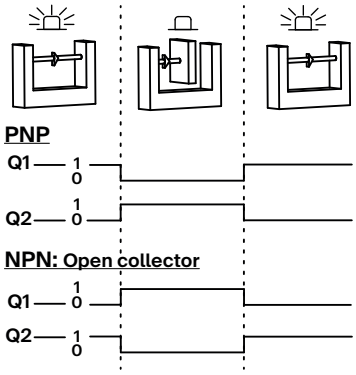

Dimensions in mm (inch)
① Fork width
② Fork depth
③ Detection axis
④ fixing hole
⑤ Cable with flying leads, 4-wire, AWG 28, 0.09 mm²

**PINOUTS, SEE TABLE TECHNICAL DATA: ELECTRONICS**

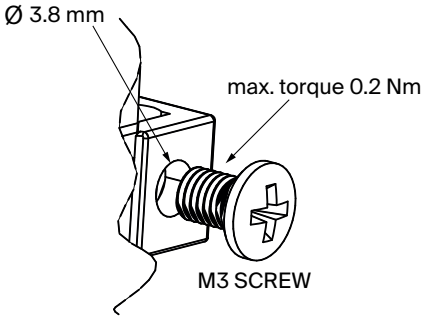


Cable with flying leads, 4-wire, AWG 28, 0.09 mm²

**STATUS OF DIGITAL OUTPUT**




**ASSEMBLY NOTE**




Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6090832

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