Product data sheet

# WFM30-40N321

## WFM

FORK SENSORS

SICK
Sensor Intelligence.

Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| WFM30-40N321 | 6037821 |

Other models and accessories ➜ www.sick.com/WFM

## Detailed technical data

### Features

| | |
|---|---|
| **Functional principle** | Optical detection principle |
| **Dimensions (W x H x D)** | 10 mm x 50 mm x 59.5 mm |
| **Fork width** | 30 mm |
| **Fork depth** | 42 mm |
| **Minimum detectable object (MDO)** | 0.8 mm |
| **Adjustment** | None |

### Mechanics/electronics

| | |
|---|---|
| **Current consumption** | < 20 mA [1] |
| **Stability of response time** | ± 15 µs |
| **Switching output** | NPN |
| **Switching output (voltage)** | PNP: HIGH = $V_S$ – ≤ 1.5 V / LOW = 0 V<br>NPN: HIGH = approx. $V_S$ / LOW ≤ 1.5 V |
| **Switching mode** | Dark switching |
| **Output current $I_{max.}$** | 100 mA |
| **Initialization time** | 140 ms |
| **Connection type** | Connector M8, 3-pin |
| **Circuit protection** | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| **Weight** | Approx. 80 g ... 190 g [2] |
| **Housing material** | Aluminum |

[1] Without load.
[2] Depending on fork width.

### Safety-related parameters

| | |
|---|---|
| **$MTTF_D$** | 131 years |
| **$DC_{avg}$** | 0 % |

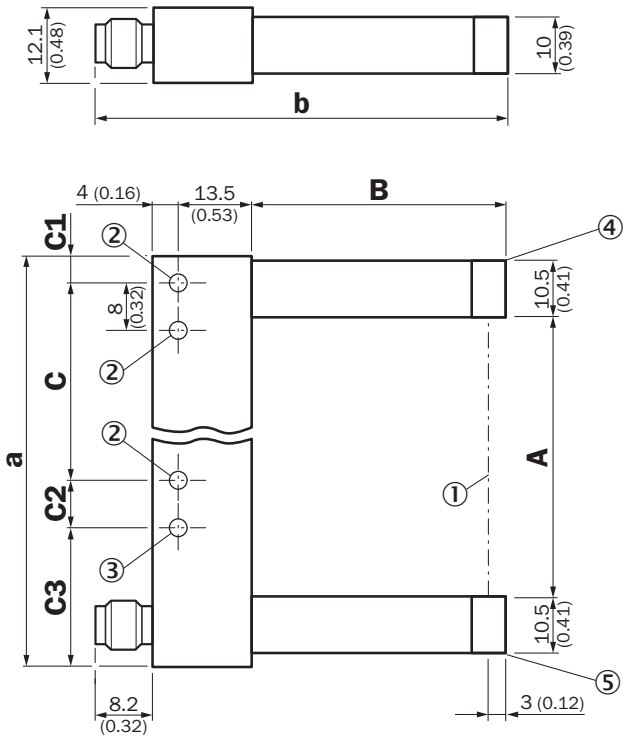
## Ambient data

| | |
|---|---|
| **Shock load** | According to EN 60068-2-27 |
| **UL File No.** | NRKH.E191603 & NRKH7.E191603 |

## Classifications

| | |
|---|---|
| **ECLASS 5.0** | 27270909 |
| **ECLASS 5.1.4** | 27270909 |
| **ECLASS 6.0** | 27270909 |
| **ECLASS 6.2** | 27270909 |
| **ECLASS 7.0** | 27270909 |
| **ECLASS 8.0** | 27270909 |
| **ECLASS 8.1** | 27270909 |
| **ECLASS 9.0** | 27270909 |
| **ECLASS 10.0** | 27270909 |
| **ECLASS 11.0** | 27270909 |
| **ECLASS 12.0** | 27270909 |
| **ETIM 5.0** | EC002720 |
| **ETIM 6.0** | EC002720 |
| **ETIM 7.0** | EC002720 |
| **ETIM 8.0** | EC002720 |
| **UNSPSC 16.0901** | 39121528 |

## Dimensional drawing (Dimensions in mm (inch))




**Dimensions in mm (inch)**

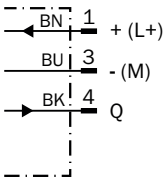
| | A<br>Fork width | B<br>Fork depth | C | C1 |
|---|---|---|---|---|
| **WFM30** | 30<br>(1.18) | 42<br>(1.65) | 30<br>(1.18) | 6.5<br>(0.26) |
| **WFM50** | 50<br>(1.97) | 60<br>(2.36) | 40<br>(1.57) | 6.5<br>(0.26) |
| **WFM80** | 80<br>(3.15) | 60<br>(2.36) | 70<br>(2.76) | 6.5<br>(0.26) |
| **WFM120** | 120<br>(4.72) | 124.3<br>(4.89) | 100<br>(3.94) | 17<br>(0.67) |
| **WFM180** | 180<br>(7.09) | 124.3<br>(4.89) | 152<br>(5.98) | 22<br>(0.87) |

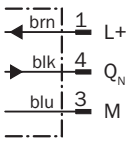
| | C2 | C3 | a | b |
|---|---|---|---|---|
| **WFM30** | –<br>(–) | –<br>(–) | 54<br>(2.13) | 67.7<br>(2.67) |
| **WFM50** | 8<br>(0.31) | 19.5<br>(0.77) | 74<br>(2.91) | 85.7<br>(3.37) |
| **WFM80** | 8<br>(0.31) | 19.5<br>(0.77) | 104<br>(4.09) | 85.7<br>(3.37) |
| **WFM120** | 10<br>(0.39) | 17<br>(0.67) | 144<br>(5.67) | 150.2<br>(5.91) |
| **WFM180** | 8<br>(0.31) | 22<br>(0.87) | 204<br>(8.03) | 150.2<br>(5.91) |

① Optical axis
② Mounting hole, Ø 4.3 mm
③ WFM50/80/120/180
④ Transmitted light (red)
⑤ Function signal indicator (yellow), switching output

## Connection diagram

Cd-045



## Recommended accessories

Other models and accessories ➜ www.sick.com/WFM

| | Brief description | Type | Part no. |
|---|---|---|---|
| Others | | | |
| | • **Connection type head A:** Female connector, M8, 3-pin, straight<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** 0.14 mm² ... 0.5 mm² | DOS-0803-G | 7902077 |
| | • **Connection type head A:** Male connector, M8, 3-pin, straight<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** 0.14 mm² ... 0.5 mm² | STE-0803-G | 6037322 |
| | • **Connection type head A:** Female connector, M8, 3-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 3-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with chemicals | YF8U13-050VA1XLEAX | 2095884 |

# SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

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