



WFE-030040B321

WFE

**FORK SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type           | part no. |
|----------------|----------|
| WFE-030040B321 | 1106551  |

Other models and accessories → [www.sick.com/WFE](http://www.sick.com/WFE)

### Detailed technical data

#### Features

|  |   |
|--|---|
| <b>Dimensions (W x H x D)</b>          | 10 mm x 59.3 mm x 60.5 mm   |
| <b>Fork width</b>                      | 30 mm   |
| <b>Fork depth</b>                      | 40 mm   |
| <b>Light source</b>                    | LED, visible red light  |
| <b>Minimum detectable object (MDO)</b> | 0.5 mm  |
| <b>Display</b>                         | LED indicator green: power on<br>LED indicator, yellow: Status switching output Q |
| <b>Adjustment</b>                      | No adjustment possibility   |
| <b>Safety-related parameters</b>       |   |
|  | MTTF <sub>D</sub> 1,217 years   |
|  | DC <sub>avg</sub> 0 %   |
|  | T <sub>M</sub> (mission time) 20 years  |

#### Electronics

|                                   |   |
|-----------------------------------|---|
| <b>Supply voltage</b>             | 10 V DC ... 30 V DC   |
| <b>Ripple</b>                     | < 10 %  |
| <b>Current consumption</b>        | < 30 mA <sup>1)</sup>                                       |
| <b>Initialization time</b>        | 100 ms  |
| <b>Switching frequency</b>        | 5 kHz   |
| <b>Response time</b>              | ≤ 100 μs  |
| <b>Stability of response time</b> | ± 20 μs   |
| <b>Switching output</b>           | Push-pull: PNP/NPN  |
| <b>Switching output (voltage)</b> | Push-pull: PNP/NPN High = U <sub>V</sub> - < 2 V/Low: ≤ 2 V |

<sup>1)</sup> Without load.

|  |  |
|--|--|
| <b>Switching mode</b>                  | Dark switching   |
| <b>Switching output hysteresis</b>     | < 0.1 mm   |
| <b>Output current I<sub>max.</sub></b> | 100 mA   |
| <b>Protection class</b>                | III  |
| <b>Circuit protection</b>              | U <sub>V</sub> connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| <b>Connection type</b>                 | Connector M8, 3-pin  |
| <b>Pinouts</b>                         |  |
|  | BN 1 + (L+)  |
|  | BU 3 - (M)   |
|  | BK 4 Q   |

<sup>1)</sup> Without load.

## Mechanics

|                         |                                    |
|-------------------------|------------------------------------|
| <b>Housing material</b> | ABS<br>Coated carbon steel (frame) |
| <b>Weight</b>           | Approx. 70 g                       |

## Ambient data

|                                      |  |
|--------------------------------------|--|
| <b>Ambient operating temperature</b> | -20 °C ... +60 °C                        |
| <b>Ambient temperature, storage</b>  | -40 °C ... +75 °C                        |
| <b>Ambient light immunity</b>        | ≤ 10,000 lx                              |
| <b>Shock load</b>                    | According to IEC 60068-2-27 (30 g/11 ms) |
| <b>Enclosure rating</b>              | IP67                                     |
| <b>UL File No.</b>                   | NRKH.E348498 & NRKH7.E348498             |

## Certificates

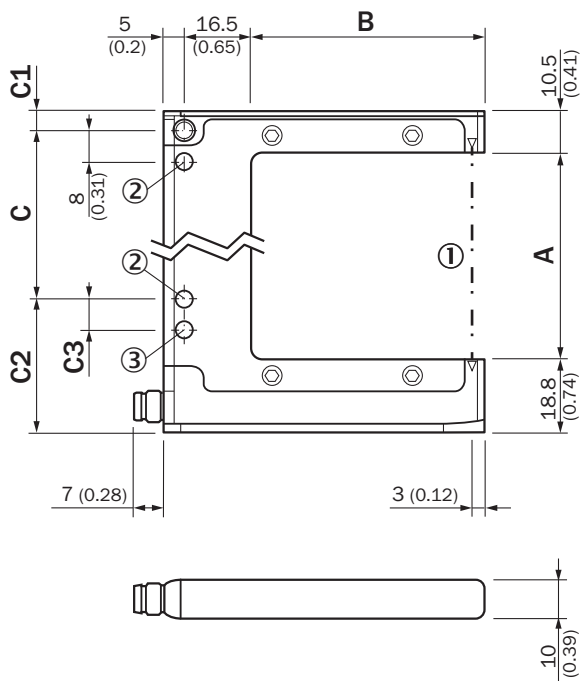
|  |   |
|--|---|
| <b>EU declaration of conformity</b>          | ✓ |
| <b>UK declaration of conformity</b>          | ✓ |
| <b>ACMA declaration of conformity</b>        | ✓ |
| <b>Moroccan declaration of conformity</b>    | ✓ |
| <b>China RoHS</b>                            | ✓ |
| <b>cULus certificate</b>                     | ✓ |
| <b>Photobiological safety (IEC EN 62471)</b> | ✓ |

## Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270909 |
| <b>ECLASS 5.1.4</b> | 27270909 |
| <b>ECLASS 6.0</b>   | 27270909 |
| <b>ECLASS 6.2</b>   | 27270909 |
| <b>ECLASS 7.0</b>   | 27270909 |
| <b>ECLASS 8.0</b>   | 27270909 |
| <b>ECLASS 8.1</b>   | 27270909 |

|                       |          |
|-----------------------|----------|
| <b>ECLASS 9.0</b>     | 27270909 |
| <b>ECLASS 10.0</b>    | 27270909 |
| <b>ECLASS 11.0</b>    | 27270909 |
| <b>ECLASS 12.0</b>    | 27270909 |
| <b>ETIM 5.0</b>       | EC002720 |
| <b>ETIM 6.0</b>       | EC002720 |
| <b>ETIM 7.0</b>       | EC002720 |
| <b>ETIM 8.0</b>       | EC002720 |
| <b>UNSPSC 16.0901</b> | 39121528 |

### Dimensional drawing WFE-xxxxxxx3xx



Dimensions in mm (inch)

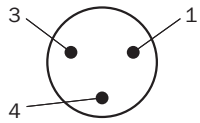
① Optical axis

② Mounting hole,  $\varnothing$  4.3 mm

③ only WFE-050/-080/-120/-180

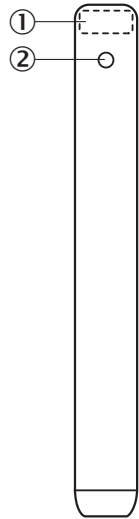
| Type           | A (fork width) | B (fork depth) | C          | C1          | C2          | C3        |
|----------------|----------------|----------------|------------|-------------|-------------|-----------|
| WFE-030040xxxx | 30 (1.18)      | 39 (1.54)      | 30 (1.18)  | 5 (0.2)     | 24.3 (0.96) | -         |
| WFE-050060xxxx | 50 (1.97)      | 57 (2.25)      | 40 (1.57)  | 5 (0.2)     | 34.3 (1.35) | 8 (0.31)  |
| WFE-080060xxxx | 80 (3.15)      | 57 (2.24)      | 70 (2.76)  | 5 (0.2)     | 34.3 (1.35) | 8 (0.31)  |
| WFE-120120xxxx | 120 (4.72)     | 121.5 (4.78)   | 100 (3.94) | 15.5 (0.61) | 33.8 (1.33) | 10 (0.39) |
| WFE-180120xxxx | 180 (7.09)     | 121.5 (4.78)   | 152 (5.98) | 20.5 (0.81) | 36.8 (1.45) | 8 (0.31)  |

Pinouts, see table Technical data: Electronics



Connector M8, 3-pin

Adjustments WFE-xxxxxxx1



- ① Status indicator LED, yellow: Status switching output
- ② LED indicator green: power

Recommended accessories

Other models and accessories → [www.sick.com/WFE](http://www.sick.com/WFE)

|                       | Brief description  | Type               | part no. |
|-----------------------|--|--------------------|----------|
| connectors and cables |  |                    |          |
|                       | <ul style="list-style-type: none"> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></li> </ul>   | DOS-0803-G         | 7902077  |
|                       | <ul style="list-style-type: none"> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection type head A:</b> Male connector, M8, 3-pin, straight, A-coded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></li> </ul>   | STE-0803-G         | 6037322  |
|                       | <ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 3-wire, PVC</li> <li>• <b>Application:</b> Uncontaminated zones, Zones with chemicals</li> </ul> | 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.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)