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Product data sheet



# WFE-030040B321

WFE

**FORK SENSORS**

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# WFE-030040B321 | WFE

FORK SENSORS



Illustration may differ

## Ordering information

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

Other models and accessories → www.sick.com/WFE

## Detailed technical data

### Features

| | |
|---|---|
| **Functional principle** | Fork sensor |
| **Dimensions (W x H x D)** | 10 mm x 59.3 mm x 60.5 mm |
| **Fork width** | 30 mm |
| **Fork depth** | 40 mm |
| **Minimum detectable object (MDO)** | 0.5 mm |
| **Adjustment** | No adjustment possibility |

### Mechanics/electronics

| | |
|---|---|
| **Supply voltage** | 10 V DC ... 30 V DC |
| **Current consumption** | < 30 mA [1] |
| **Switching frequency** | 5 kHz |
| **Stability of response time** | ± 20 µs |
| **Switching output** | Push-pull: PNP/NPN |
| **Switching output (voltage)** | Push-pull: PNP/NPN High = $U_V$ - < 2 V/Low: ≤ 2 V |
| **Switching mode** | Dark switching |
| **Switching output hysteresis** | < 0.1 mm |
| **Output current $I_{max.}$** | 100 mA |
| **Initialization time** | 100 ms |
| **Connection type** | Connector M8, 3-pin |
| **Protection class** | III |
| **Circuit protection** | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| **Enclosure rating** | IP67 |

[1] Without load.

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| | |
|---|---|
| **Housing material** | Plastic, ABS, Coated carbon steel (frame) |
| **Indication** | LED indicator green: power on<br>LED indicator, yellow: Status switching output Q |

[1] Without load.

## Safety-related parameters

| | |
|---|---|
| **$MTTF_D$** | 1,217 years |
| **$DC_{avg}$** | 0 % |
| **$T_M$ (mission time)** | 20 years |

## Ambient data

| | |
|---|---|
| **Ambient operating temperature** | –20 °C ... +60 °C |
| **Ambient temperature, storage** | –40 °C ... +75 °C |
| **Ambient light immunity** | Sunlight: |
| **Shock load** | According to IEC 60068-2-27 (30 g/11 ms) |
| **UL File No.** | NRKH.E348498 & NRKH7.E348498 |

## 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 |

## Connection/Pin assignment

| | |
|---|---|
| **Connection type** | Connector M8, 3-pin |
| **Pin assignment** | |
| BN 1 | + (L+) |
| BU 3 | - (M) |
| BK 4 | Q |

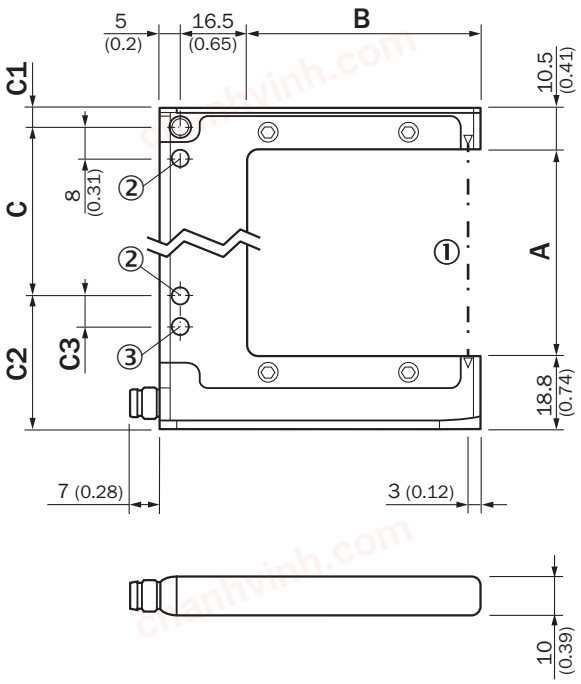
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## Dimensional drawing (Dimensions in mm (inch))

WFE-xxxxxxx3xx




① Optical axis
② Mounting hole, Ø 4.3 mm
③ Only WFE-050/-080/-120/-180

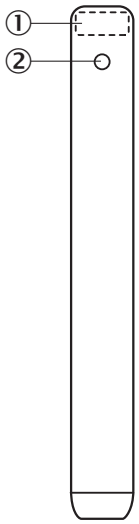
| Type | A (fork width) | B (fork depth) | C | C1 | C2 | C3 |
|---|---|---|---|---|---|---|
| WFE-**030040**xxxx | 30 (1.18) | 39 (1.54) | 30 (1.18) | 5 (0.2) | 24.3 (0.96) | - |
| WFE-**050060**xxxx | 50 (1.97) | 57 (2.25) | 40 (1.57) | 5 (0.2) | 34.3 (1.35) | 8 (0.31) |
| WFE-**080060**xxxx | 80 (3.15) | 57 (2.24) | 70 (2.76) | 5 (0.2) | 34.3 (1.35) | 8 (0.31) |
| WFE-**120120**xxxx | 120 (4.72) | 121.5 (4.78) | 100 (3.94) | 15.5 (0.61) | 33.8 (13.31) | 10 (0.39) |
| WFE-**180120**xxxx | 180 (7.09) | 121.5 (4.78) | 152 (5.98) | 20.5 (0.81) | 36.8 (1.45) | 8 (0.31) |

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## Adjustments

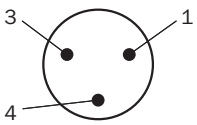
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① Status indicator LED, yellow: Status switching output
② LED indicator green: power

## Pin assignment

Connection type. see table: Connection/PIN assignment




Connector M8, 3-pin

## Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|---|---|
| Plug connectors and cables | | | |
|  | • **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 |
|  | • **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 |

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| | Brief description | Type | Part no. |
|---|---|---|---|
|  | • **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 |

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# SICK AT A GLANCE

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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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