



# WFE-180120B337

WFE

**FORK SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WFE-180120B337	1106558

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

Detailed technical data

Features

Dimensions (W x H x D)	10 mm x 209.3 mm x 143 mm
Fork width	180 mm
Fork depth	120 mm
Minimum detectable object (MDO)	0.5 mm
Light source	LED, red, visible red light
Adjustment	Potentiometer, light/dark switching
Safety-related parameters	
MTTF <sub>D</sub>	1,217 years
DC <sub>avg</sub>	0 %
T <sub>M</sub> (mission time)	20 years

Electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	< 10 %
Current consumption	< 30 mA <sup>1)</sup>
Switching frequency	5 kHz
Response time	≤ 100 μs
Stability of response time	± 20 μs
Switching output	Push-pull: PNP/NPN
Switching output (voltage)	Push-pull: PNP/NPN High = U <sub>V</sub> - < 2 V/Low: ≤ 2 V
Switching mode	Light/dark switching
Switching output hysteresis	< 0.2 mm
Output current I <sub>max.</sub>	100 mA

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

<b>Initialization time</b>	100 ms
<b>Circuit protection</b>	U <sub>V</sub> connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Enclosure rating</b>	IP67

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

## Mechanics

<b>Housing material</b>	ABS Coated carbon steel (frame)
<b>Display</b>	LED indicator green: power on LED indicator, yellow: Status switching output Q
<b>Connection type</b>	Connector M8, 3-pin
<b>Weight</b>	Approx. 245 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>Protection class</b>	III
<b>UL File No.</b>	NRKH.E348498 & NRKH7.E348498

## Connection type/pinouts

<b>Connection type</b>	Connector M8, 3-pin
<b>Pinouts</b>	
BN 1	+ (L+)
BU 3	- (M)
BK 4	Q

## Classifications

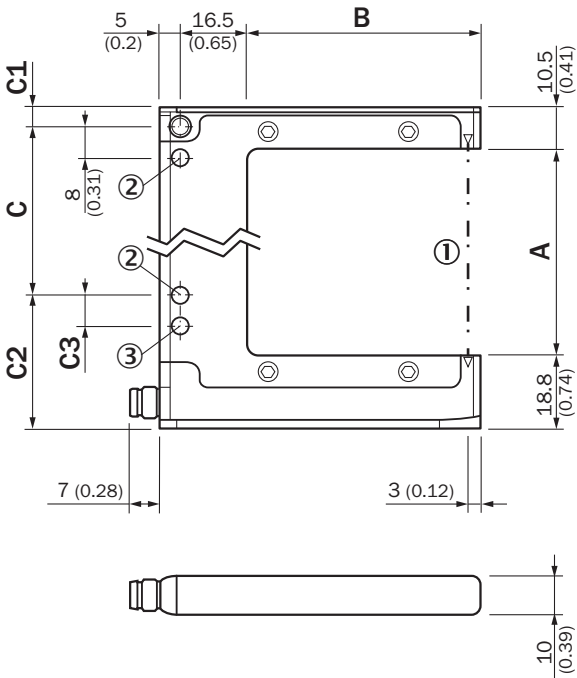
<b>ECLASS 5.0</b>	27270909
<b>ECLASS 5.1.4</b>	27270909
<b>ECLASS 6.0</b>	27270909
<b>ECLASS 6.2</b>	27270909
<b>ECLASS 7.0</b>	27270909
<b>ECLASS 8.0</b>	27270909
<b>ECLASS 8.1</b>	27270909
<b>ECLASS 9.0</b>	27270909
<b>ECLASS 10.0</b>	27270909
<b>ECLASS 11.0</b>	27270909
<b>ECLASS 12.0</b>	27270909
<b>ETIM 5.0</b>	EC002720
<b>ETIM 6.0</b>	EC002720
<b>ETIM 7.0</b>	EC002720
<b>ETIM 8.0</b>	EC002720

UNSPSC 16.0901	39121528
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Certificates

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

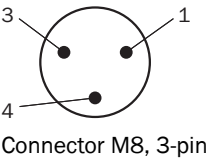
Dimensional drawing WFE-xxxxxx3xx



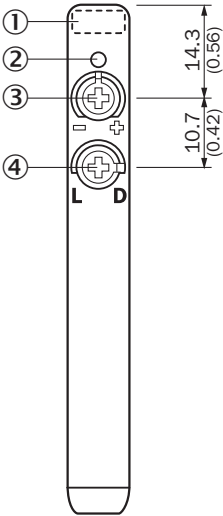
Dimensions in mm (inch)  
① Optical axis  
② Mounting hole, Ø 4.3 mm  
③ only WFE-050/-080/-120/-180

Type	A (fork width)	B (fork depth)	C	C1	C2	C3
WFE-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: Connection type/pinouts






Adjustments WFE-xxxxxxx7



- ① Status indicator LED, yellow: Status switching output
- ② LED indicator green: power
- ③ Potentiometer for sensitivity adjustment
- ④ Light/ dark rotary switch: L = light switching, D = dark switching

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>Connection type head A:</b> Female connector, M8, 3-pin, straight, A-coded</li><li>• <b>Description:</b> Unshielded</li><li>• <b>Connection systems:</b> Screw-type terminals</li><li>• <b>Permitted cross-section:</b> 0.14 mm² ... 0.5 mm²</li></ul>	DOS-0803-G	7902077
	<ul style="list-style-type: none"><li>• <b>Connection type head A:</b> Male connector, M8, 3-pin, straight, A-coded</li><li>• <b>Description:</b> Unshielded</li><li>• <b>Connection systems:</b> Screw-type terminals</li><li>• <b>Permitted cross-section:</b> 0.14 mm² ... 0.5 mm²</li></ul>	STE-0803-G	6037322
	<ul style="list-style-type: none"><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>Description:</b> Sensor/actuator cable, unshielded</li><li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</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)