





Illustration may differ



### Ordering information

Type	Part no.
WF50-95B416	6028468

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

### Detailed technical data

#### Features

<b>Functional principle</b>	Optical detection principle
<b>Dimensions (W x H x D)</b>	10 mm x 80 mm x 110 mm
<b>Fork width</b>	50 mm
<b>Fork depth</b>	95 mm
<b>Minimum detectable object (MDO)</b>	0.2 mm
<b>Adjustment</b>	Plus/minus button (Teach-in, sensitivity, light/dark switching, key lock)
<b>Teach-in mode</b>	2-point teach-in
<b>Output function</b>	Light/darkswitching, selectable via button

#### Mechanics/electronics

<b>Stability of response time</b>	± 20 µs
<b>Jitter</b>	40 µs
<b>Switching output</b>	PNP/NPN
<b>Switching output (voltage)</b>	PNP: HIGH = $U_V \leq 2 \text{ V}$ / LOW approx. 0 V NPN: HIGH = approx. $U_V$ / LOW $\leq 2 \text{ V}$
<b>Switching mode</b>	Light/dark switching
<b>Output current <math>I_{max.}</math></b>	100 mA
<b>Connection type</b>	Male connector M8, 4-pin
<b>Circuit protection</b>	$U_V$ connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Enclosure rating</b>	IP65
<b>Weight</b>	Approx. 36 g ... 160 g <sup>1)</sup>
<b>Housing material</b>	Aluminum

<sup>1)</sup> Depending on fork width.

#### Safety-related parameters

<b>MTTF<sub>D</sub></b>	97 years
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<b>DC<sub>avg</sub></b>	0 %
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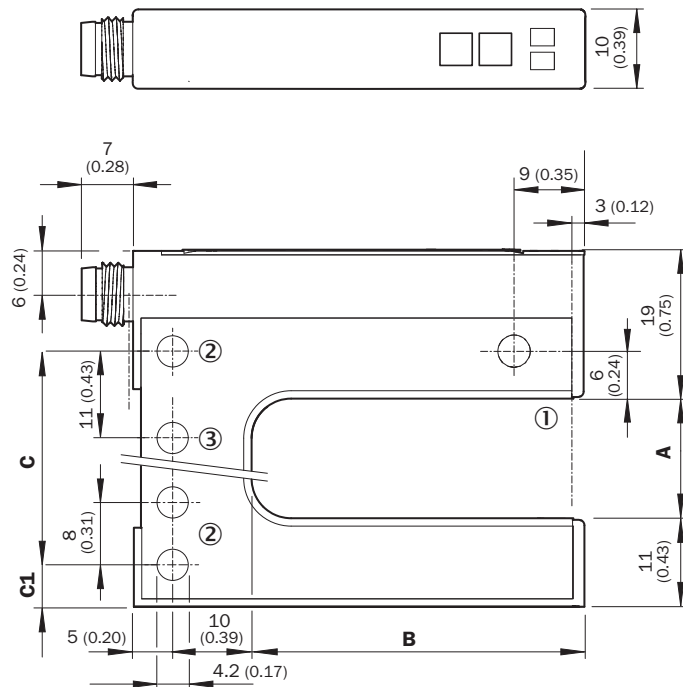
Ambient data

<b>Shock load</b>	According to EN 60068-2-27
<b>UL File No.</b>	NRKH.E191603

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 (Dimensions in mm (inch))



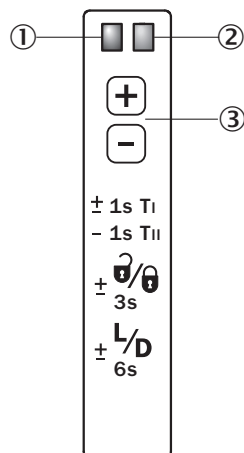
- ① Optical axis
- ② Mounting hole,  $\varnothing$  4.2 mm
- ③ WF50/80/120 only

## Dimensions in mm (inch)

	A Fork width	B Fork depth	C	C1
<b>WF2</b>	2 (0.08)	42/59/95 (1.65/2.32/3.74)	14 (0.55)	5 (0.20)
<b>WF5</b>	5 (0.20)	42/59/95 (1.65/2.32/3.74)	14 (0.55)	6.5 (0.20)
<b>WF15</b>	15 (0.59)	42/59/95 (1.65/2.32/3.74)	27 (1.06)	5 (0.20)
<b>WF30</b>	30 (1.18)	42/59/95 (1.65/2.32/3.74)	42 (1.65)	5 (0.20)
<b>WF50</b>	50 (1.97)	42/59/95 (1.65/2.32/3.74)	51 (2.01)	16 (0.63)
<b>WF80</b>	80 (3.15)	42/59/95 (1.65/2.32/3.74)	81 (3.19)	16 (0.63)
<b>WF120</b>	120 (4.72)	42/59/95 (1.65/2.32/3.74)	121 (4.76)	16 (0.63)

## Adjustments

Adjustment: teach-in via plus/minus buttons (WFxx-B416)



- ① Function signal indicator (yellow), switching output
- ② Function indicator (red)
- ③ “+”/“-” buttons and function button

## Connection diagram

Cd-086



## Concept of operation

Teach-in via plus/minus buttons (WFxx-B416)

**The switching threshold is set automatically. Fine adjustment is possible using the “+”/“–” buttons.**

### 1. No object or substrate in the beam path



Press the “+” and “–” buttons together and hold for 1 second. The red function indicator flashes slowly.



### 2. Object or label in the beam path





Press the “–” button for 1 second. Red function indicator goes out.

## Notes

Material speed = 0 (machine at a standstill).



-  Once teach-in process is complete, the switching threshold can be adjusted at any time using the “+” or “–” button. To make minor adjustments, press the “+” or “–” button once.
-  To configure settings quickly, keep the “+” or “–” button pressed for longer.

 Press both the “+” and “–” buttons together (3 seconds) to lock the device and prevent unintentional actuation.

 Press both the “+” and “–” buttons together (6 seconds) to define the switching function (light/dark switching). Standard setting:  $\bar{Q}$  = light switching.

### Recommended accessories

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

	Brief description	Type	Part no.
Others			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M8, 4-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-0804-G	6037323
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-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, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>	YF8U14-050VA3XLEAX	2095889

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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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