

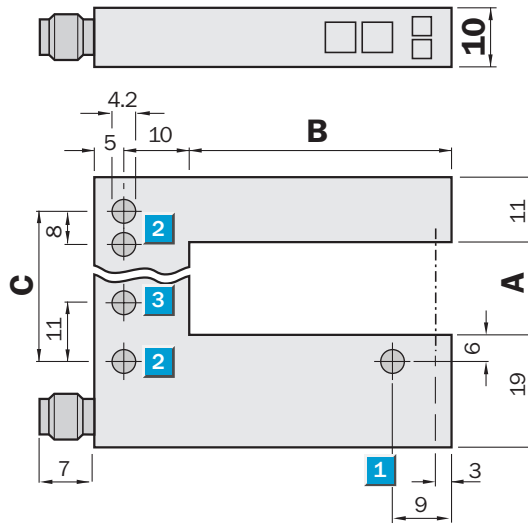
**Fork width**  
2 ... 120 mm

**Fork sensors**

- Simple and accurate adjustment via “+” and “-” buttons
- PNP and NPN switching output
- Light/dark switching adjustable
- Rugged aluminium housing

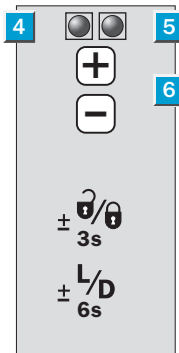
## Dimensional drawing

All types



## Adjustments possible

All types



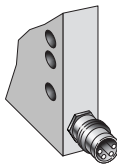
- 1 Optical axis
- 2 Mounting holes, Ø 4.2 mm
- 3 WF 50/80/120 only
- 4 Function indicator (red)
- 5 Function indicator (yellow), switching output
- 6 “+”/“-” buttons and function button

## Dimensions

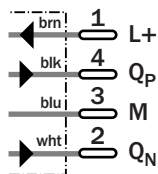
Dimensions (mm)	A Fork width	B Fork depth	C
<b>WF 2</b>	2	42/59/95	14
<b>WF 5</b>	5	42/59/95	14
<b>WF 15</b>	15	42/59/95	27
<b>WF 30</b>	30	42/59/95	42
<b>WF 50</b>	50	42/59/95	51
<b>WF 80</b>	80	42/59/95	81
<b>WF 120</b>	120	42/59/95	121

## Connection types

All types



4-pin, M8



## Accessories

Cables and connectors

Technical data		WF	2-XX <sup>1)</sup> B410	5-XX <sup>1)</sup> B410	15-XX <sup>1)</sup> B410	30-XX <sup>1)</sup> B410	50-XX <sup>1)</sup> B410	80-XX <sup>1)</sup> B410	120-XX <sup>1)</sup> B410			
<b>Fork width</b>	2 mm											
	5 mm											
	15 mm											
	30 mm											
	50 mm											
	80 mm											
	120 mm											
<b>Fork depth</b>	40, 60 or 95 mm											
<b>Light source</b>	LED, infra-red modulated											
<b>Minimum detectable object size</b>	0.2 mm											
<b>Supply voltage V<sub>S</sub></b>	10 ... 30 V DC <sup>2)</sup>											
Current consumption <sup>3)</sup>	40 mA											
Residual ripple <sup>4)</sup>	< 10 %											
<b>Switching output</b>	PNP and NPN											
	Light/dark adjustable via button											
Signal voltage	PNP	HIGH = U <sub>V</sub> - (< 2 V)/LOW = 0 V										
	NPN	HIGH = U <sub>V</sub> /LOW = < 2 V										
Output current I <sub>A</sub>	100 mA											
Stability of response time <sup>5)</sup>	± 20 µs											
Response time <sup>5)</sup> , switching frequency <sup>6)</sup>	Max. 100 µs; 10,000/s											
Initialisation time	100 ms											
<b>Ambient light immunity</b>	Incandescent lamp	5,000 Lux										
	Sunlight	10,000 Lux										
<b>VDE protection class <sup>7)</sup></b>	III											
<b>Enclosure rating</b>	IP 65											
<b>Circuit protection <sup>8)</sup></b>	A, B, C											
<b>Ambient temperature <sup>9)</sup></b>	Operation	-20 °C ... +60 °C										
	Storage	-30 °C ... +80 °C										
<b>Housing</b>	Aluminium											
<b>Weight</b>	Approx. 36 g to 160 g <sup>10)</sup>											

1) XX = Fork depth (E.g. 40 = fork depth equivalent to 40 mm)  
 2) Limit values, reverse-polarity protected  
 3) Without load

4) May not exceed or fall short of V<sub>S</sub>-tolerances  
 5) Signal transit time with resistive load  
 6) With light/dark ratio 1:1; no time delay  
 7) Reference voltage 50 V DC

8) A = V<sub>S</sub> connections reverse-polarity protected  
 B = Outputs short-circuit protected  
 C = Interference pulse suppression  
 9) Do not bend below 0 °C

10) Depending on fork width

**Truth table**

Switching type	Light-switching (Q)		Dark-switching (Q̄)	
	Yes	No	Yes	No
<b>Light path free</b>	Yes	No	Yes	No
<b>PNP/NPN output</b>	HIGH	LOW	LOW	HIGH
<b>Function indicator (yellow) On</b>	Off	Off	Off	On

**Order information**

Fork depth 40 mm		Fork depth 60 mm		Fork depth 95 mm	
Type	Part no.	Type	Part no.	Type	Part no.
WF2-40B410	6 028 428	WF2-60B410	6 028 436	WF2-95B410	6 028 443
WF5-40B410	6 028 429	WF5-60B410	6 028 437	WF5-95B410	6 028 444
WF15-40B410	6 028 430	WF15-60B410	6 028 438	WF15-95B410	6 028 445
WF30-40B410	6 028 431	WF30-60B410	6 028 439	WF30-95B410	6 028 446
WF50-40B410	6 028 432	WF50-60B410	6 028 440	WF50-95B410	6 028 447
WF80-40B410	6 028 433	WF80-60B410	6 028 441	WF80-95B410	6 028 448
WF120-40B410	6 028 435	WF120-60B410	6 028 442	WF120-95B410	6 028 449