

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

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_S -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 = U_V 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 ($\bar{Q}$)	
Light path free	yes	no	yes	no
PNP/NPN output	HIGH	LOW	LOW	HIGH
Function indicator (yellow) On	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

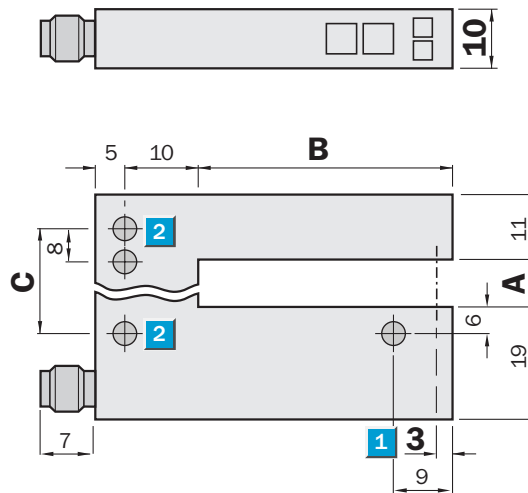

Fork width
2 ... 120 mm

Fork sensors

- Simple setting using 2-point Teach-in
- PNP and NPN switching output
- Light/dark switching adjustable
- Rugged aluminium housing

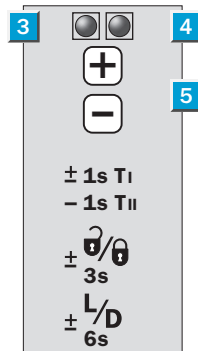
Dimensional drawing

All types



Adjustments possible

All types



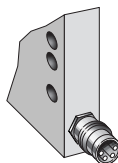
- 1 Optical axis
- 2 Mounting holes, Ø 4.2 mm
- 3 Function indicator (red)
- 4 Function indicator (yellow), switching output
- 5 "+" / "-" buttons and function button

Dimensions

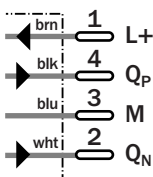
Dimensions (mm)	A Fork width	B Fork depth	C
WF 2	2	42/59/95	14
WF 5	5	42/59/95	14
WF 15	15	42/59/95	27
WF 30	30	42/59/95	42
WF 50	50	42/59/95	40
WF 80	80	42/59/95	70
WF 120	120	42/59/95	110

Connection types

All types



4-pin, M8



Accessories

Cables and Connectors

