



Fork sensors WF, WFnext

WF50-60B410



Model Name > **WF50-60B410**
Part No. > **6028440**



Illustration may differ

At a glance

- Infrared light source
- Simple and accurate adjustment via teach-in or manually via "+"/"-" buttons
- Fast response time (max. 100 µs)
- PNP and NPN switching output
- Light/dark switching function
- 21 different models with different fork widths and depths
- Rugged, IP 65 aluminum housing

Your benefits

- Fast response time and fine resolution ensure reliable detection even at high speeds
- Infrared light source provides excellent ambient light immunity
- User friendly setting via teach-in or "+"/"-" button
- A wide range of different fork sizes enables flexible installation
- The aluminum housing meets all requirements for use in harsh industrial conditions



Features

Functional principle:	Optical detection principle
Fork width:	50 mm
Fork depth:	59 mm
Label detection:	-
Light source:	LED
Type of light:	Infrared light
Adjustment:	Manual ("+"/"-" button)
Output function:	Light/darkswitching, selectable via button
Housing design (light emission):	Fork shaped
Minimum detectable object (MDO):	0.2 mm

Mechanics/electronics

Residual ripple ¹⁾ :	< 10 %
Power consumption ²⁾ :	40 mA
Switching frequency ³⁾ :	10 kHz
Response time ⁴⁾ :	100 µs
Stability of response time:	± 20 µs
Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V PNP: HIGH = VS- ≤ 2 V / LOW approx. 0 V

Switching mode:	PNP/NPN
Output current I _{max.} :	100 mA
Initialization time:	100 ms
Electrical connection:	Connector M8, 4-pin
Protection class ⁵⁾ :	III
Circuit protection:	VS connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Enclosure rating:	IP 65
Weight:	Ca. 36 g ... 160 g ⁶⁾
Housing material:	Aluminum, Metal
Supply voltage:	10 V DC ... 30 V DC ⁷⁾
Ambient light immunity:	Sunlight: ≤ 10,000 klx
Fieldbus interface:	-

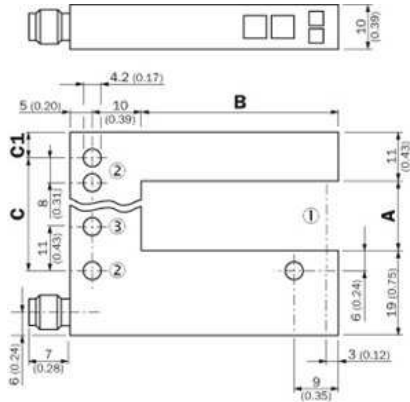
1) May not exceed or fall short of V_S tolerances ²⁾ Without load ³⁾ With light/dark ratio 1:1 ⁴⁾ Signal transit time with resistive load ⁵⁾ Reference voltage DC 50 V ⁶⁾
 Depending on fork width ⁷⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A

Ambient data

Shock load:	According to EN 60068-2-27
UL File No.:	NRKH.E191603
Ambient temperature operation:	-20 °C ... +60 °C ¹⁾
Ambient storage temperature:	-30 °C ... +80 °C

¹⁾ Do not bend below 0 °C

Dimensional drawing

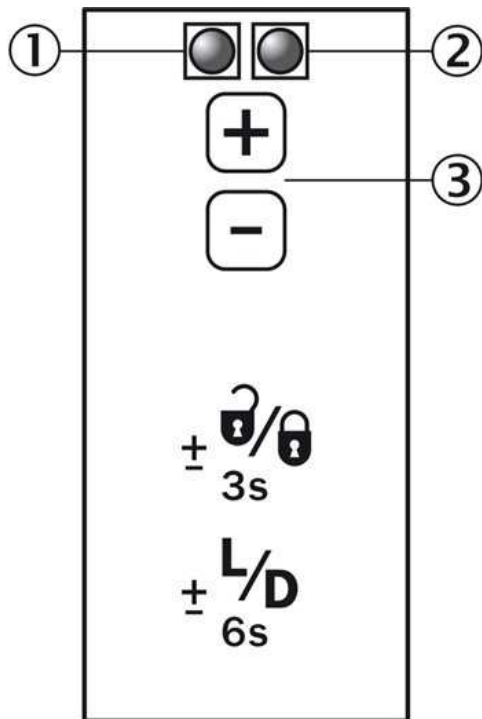


Dimensions in mm (inch)

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

- |1| Optical axis
- |2| Mounting hole, Ø 4.2 mm
- |3| WF50/80/120 only

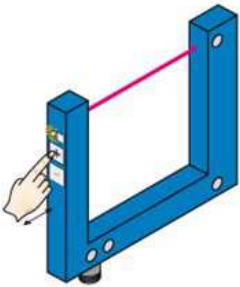
Adjustments



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

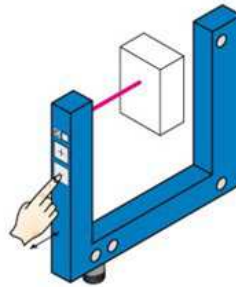
Bedienhinweis

1. No object in the beam path



The yellow function indicator illuminates when the light received is at its optimum level. If necessary, increase sensitivity using the "+" button.

2. Object in the beam path



Yellow function indicator goes out. If necessary, reduce sensitivity using the "-" button.

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