

WF2-40B410

WF

FORK SENSORS

SICK
Sensor Intelligence.

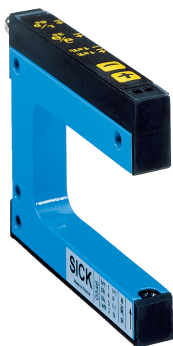


Illustration may differ



Ordering information

Type	Part no.
WF2-40B410	6028428

Other models and accessories → www.sick.de/WF

Detailed technical data

Features

Dimensions (W x H x D)	10 mm x 32 mm x 57 mm
Functional principle	Optical detection principle
Housing design (light emission)	Fork shaped
Fork width	2 mm
Fork depth	42 mm
Minimum detectable object (MDO)	0.2 mm
Label detection	✓
Light source	LED, Infrared light
Adjustment	Manual ("+"/"-" button)
Output function	Light/darkswitching, selectable via button

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 10 % ²⁾
Switching frequency	10 kHz ³⁾
Stability of response time	± 20 µs
Output type	PNP: HIGH = $V_{S-} \leq 2 V$ / LOW approx. 0 V NPN: HIGH = approx. V_S / LOW ≤ 2 V
Switching output	Light/dark switching
Output current I_{max}	100 mA
Connection type	Connector M8, 4-pin
Ambient light immunity	Sunlight: ≤ 10,000 klx

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ With light/dark ratio 1:1.

⁴⁾ Reference voltage DC 50 V.

⁵⁾ Depending on fork width.

Protection class	III ⁴⁾
Circuit protection	U _V connections, reverse polarity protected, Output Q short-circuit protected, Interference pulse suppression
Enclosure rating	IP 65
Weight	Approx. 36 g ... 160 g ⁵⁾
Housing material	Metal/Aluminum

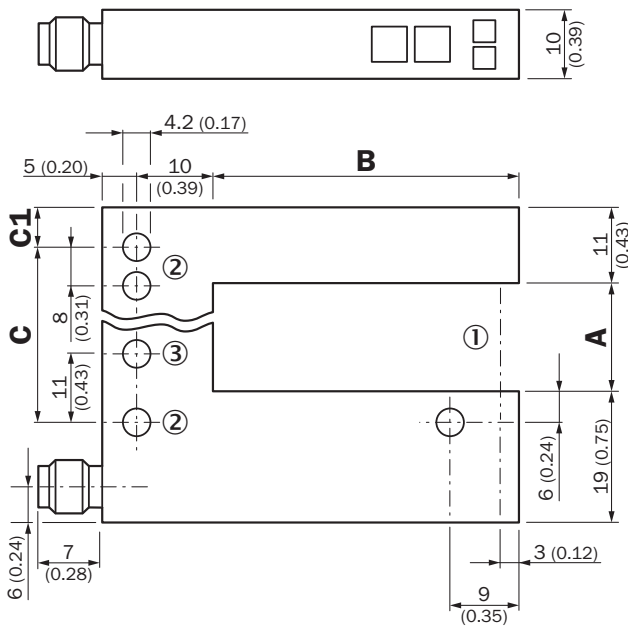
- 1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
 2) May not exceed or fall below U_V tolerances.
 3) With light/dark ratio 1:1.
 4) Reference voltage DC 50 V.
 5) Depending on fork width.

Ambient data

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

- 1) Do not bend below 0 °C.

Dimensional drawing (dimensions in mm (inch))



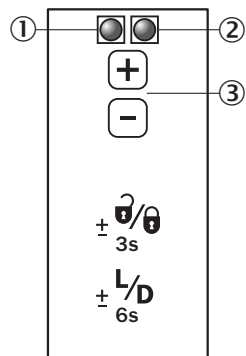
- ① Optical axis
 ② Mounting hole, Ø 4.2 mm
 ③ WF50/80/120 only

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)

Adjustments

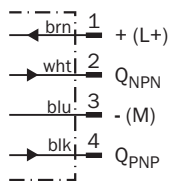
Manual



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

Connection diagram

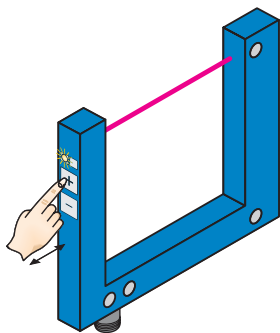
Cd-086



Concept of operation

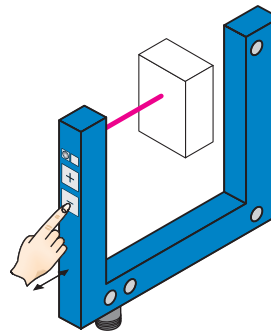
+/- button

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.

Recommended accessories

Other models and accessories → www.sick.de/WF

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight Head B: Cable Cable: PVC, unshielded, 2 m	DOL-0804-G02M	6009870
	Head A: female connector, M8, 4-pin, straight Head B: Cable Cable: PVC, unshielded, 5 m	DOL-0804-G05M	6009872
	Head A: female connector, M8, 4-pin, straight Head B: Cable Cable: PVC, unshielded, 10 m	DOL-0804-G10M	6010754
	Head A: female connector, M8, 4-pin, angled Head B: Cable Cable: PVC, unshielded, 2 m	DOL-0804-W02M	6009871
	Head A: female connector, M8, 4-pin, angled Head B: Cable Cable: PVC, unshielded, 5 m	DOL-0804-W05M	6009873
	Head A: female connector, M8, 4-pin, angled Head B: Cable Cable: PVC, unshielded, 10 m	DOL-0804-W10M	6010755
	Head A: female connector, M8, 4-pin, straight Head B: - Cable: unshielded	DOS-0804-G	6009974
	Head A: female connector, M8, 4-pin, angled Head B: - Cable: unshielded	DOS-0804-W	6009975

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