



Illustration may differ



Ordering information

Type	Part no.
WF50-60B410	6028440

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

Detailed technical data

Features

Functional principle	Optical detection principle
Dimensions (W x H x D)	10 mm x 80 mm x 74 mm
Housing design (light emission)	Fork shaped
Fork width	50 mm
Fork depth	59 mm
Minimum detectable object (MDO)	0.2 mm
Label detection	✓
Light source	LED, infrared, Infrared light
Wave length	850 nm
Adjustment	Plus/minus button (Sensitivity, light/dark switching, key lock)
Teach-in mode	–
Output function	Light/darkswitching, selectable via button

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 10 % ²⁾
Current consumption	40 mA
Switching frequency	10 kHz ³⁾
Response time	100 µs
Stability of response time	± 20 µs
Jitter	40 µs
Switching output	PNP/NPN

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.

Switching output (voltage)	PNP: HIGH = $U_V \leq 2 \text{ V}$ / LOW approx. 0 V NPN: HIGH = approx. U_V / LOW $\leq 2 \text{ V}$
Switching mode	Light/dark switching
Output current I_{max}	100 mA
Initialization time	100 ms
Connection type	Male connector M8, 4-pin
Protection class	III ⁴⁾
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP65
Weight	Approx. 36 g ... 160 g ⁵⁾
Housing material	Metal, Aluminum

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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

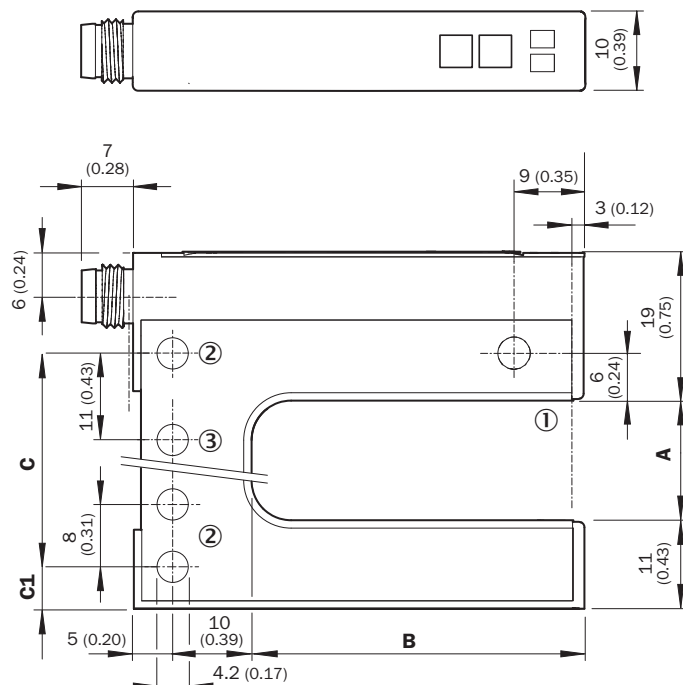
Ambient operating temperature	-20 °C ... +60 °C ¹⁾
Ambient temperature, storage	-30 °C ... +80 °C
Ambient light immunity	$\leq 10,000 \text{ lx}$
Shock load	According to EN 60068-2-27
UL File No.	NRKH.E191603

¹⁾ Do not bend below 0 °C.

Classifications

ECl@ss 5.0	27270909
ECl@ss 5.1.4	27270909
ECl@ss 6.0	27270909
ECl@ss 6.2	27270909
ECl@ss 7.0	27270909
ECl@ss 8.0	27270909
ECl@ss 8.1	27270909
ECl@ss 9.0	27270909
ECl@ss 10.0	27270909
ECl@ss 11.0	27270909
ETIM 5.0	EC002720
ETIM 6.0	EC002720
ETIM 7.0	EC002720
ETIM 8.0	EC002720
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))



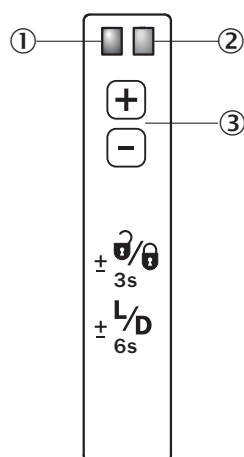
- ① Optical axis
- ② Mounting hole, \varnothing 4.2 mm
- ③ WF50/80/120 only

Dimensions in mm (inch)

	A Fork width	B Fork depth	C	C1
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

Adjustment: plus/minus buttons (WFxx-B410)



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

Connection diagram

Cd-086



Concept of operation

Setting the switching threshold via plus/minus buttons (WFxx-B410)

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.com/WF

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323

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