Data sheet

WF80-40B410

WF

FORK SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
WF80-40B410	6028433

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 110 mm x 57 mm
Fork width	80 mm
Fork depth	42 mm
Minimum detectable object (MDO)	0.2 mm
Label detection	✓
Light source	LED, infrared, Infrared light
Adjustment	Plus/minus button (Sensitivity, light/dark switching, key lock)
Teach-in mode	–
Output function	Light/darkswitching, selectable via button
Safety-related parameters	
$MTTF_D$	97 years
DC_{avg}	0 %

Electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	< 10 %
Current consumption	40 mA
Switching frequency	10 kHz
Response time	≤ 100 µs
Stability of response time	± 20 µs
Jitter	40 µs
Switching output	PNP/NPN
Switching output (voltage)	PNP: HIGH = U_V ≤ 2 V / LOW approx. 0 V

	NPN: HIGH = approx. U_V / LOW ≤ 2 V
Switching mode	Light/dark switching
Output current $I_{max.}$	100 mA
Initialization time	100 ms
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP65

Mechanics

Housing material	Aluminum
Connection type	Male connector M8, 4-pin
Weight	Approx. 36 g ... 160 g [1]

[1] Depending on fork width.

Ambient data

Ambient operating temperature	–20 °C ... +60 °C [1]
Ambient temperature, storage	–30 °C ... +80 °C
Ambient light immunity	≤ 10,000 lx
Shock load	According to EN 60068-2-27
Protection class	III [2]
UL File No.	NRKH.E191603

[1] Do not bend below 0 °C.
[2] Reference voltage DC 50 V.

Certificates

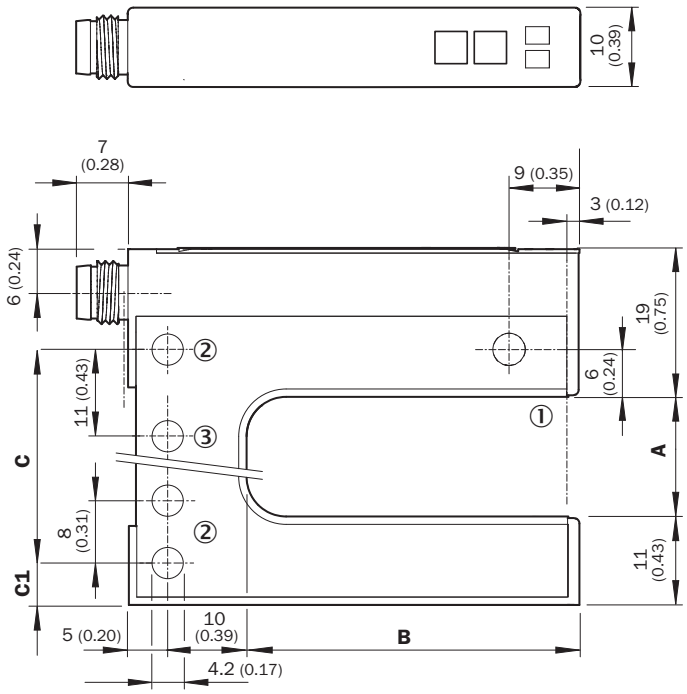
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Photobiological safety (IEC EN 62471)	✓

Classifications

ECLASS 5.0	27270909
ECLASS 5.1.4	27270909
ECLASS 6.0	27270909
ECLASS 6.2	27270909
ECLASS 7.0	27270909
ECLASS 8.0	27270909
ECLASS 8.1	27270909
ECLASS 9.0	27270909
ECLASS 10.0	27270909

ECLASS 11.0	27270909
ECLASS 12.0	27270909
ETIM 5.0	EC002720
ETIM 6.0	EC002720
ETIM 7.0	EC002720
ETIM 8.0	EC002720
UNSPSC 16.0901	39121528

Dimensional drawing

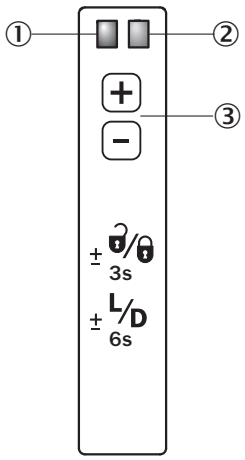


Dimensions in mm (inch)

	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)

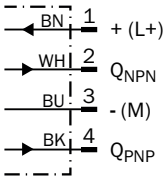
Dimensions in mm (inch)
① Optical axis
② Mounting hole, Ø 4.2 mm
③ WF50/80/120 only

Adjustments Adjustment: plus/minus buttons (WFxx-B410)



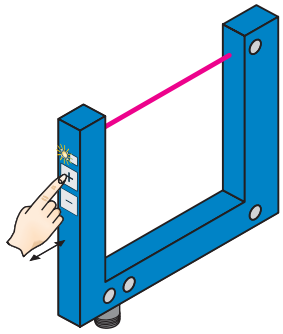
① Function signal indicator (yellow), switching output
② Function indicator (red)
③ “+”/“–” buttons and function button

Connection diagram Cd-086



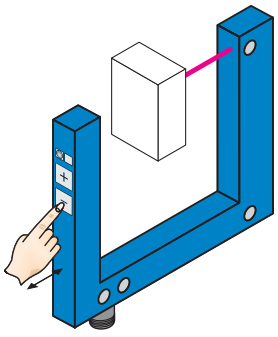
Concept of operation Setting the switching threshold via plus/minus buttons (WFxx-B410)

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.
connectors and cables			
	• **Connection type head A:** Male connector, M8, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323
	• **Connection type head A:** Female connector, M8, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF8U14-050VA3XLEAX	2095889

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com

SICK
Sensor Intelligence.