

WF5-95B416 WF

FORK SENSORS





Ordering information

Туре	part no.
WF5-95B416	6028465

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

Illustration may differ



Detailed technical data

Features

Functional principle	Optical detection principle
Dimensions (W x H x D)	10 mm x 35 mm x 110 mm
Fork width	5 mm
Fork depth	95 mm
Minimum detectable object (MDO)	0.2 mm
Light source	LED, infrared, Infrared light
Adjustment	Plus/minus button (Teach-in, sensitivity, light/dark switching, key lock)
Teach-in mode	2-point teach-in
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 %
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 = $U_V \le 2 \text{ V} / \text{LOW approx. 0 V}$ NPN: HIGH = approx. $U_V / \text{LOW} \le 2 \text{ V}$
Switching mode	Light/dark switching

Output current I _{max.}	100 mA
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.

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)	✓

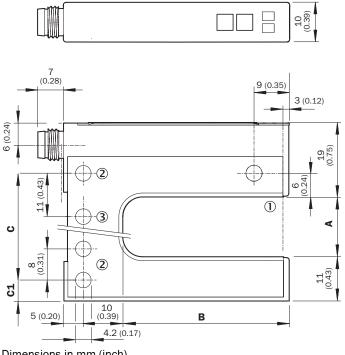
Classifications

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

²⁾ Reference voltage DC 50 V.

ETIM 6.0	EC002720
ETIM 7.0	EC002720
ETIM 8.0	EC002720
UNSPSC 16.0901	39121528

Dimensional drawing



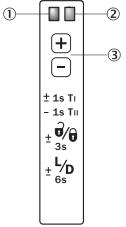
Dimensions in mm (inch)

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

Dimensions in mm (inch)

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

Adjustments Adjustment: teach-in via plus/minus buttons (WFxx-B416)



① Function signal indicator (yellow), switching output

- ② Function indicator (red)
- ③ "+"/"-" buttons and function button

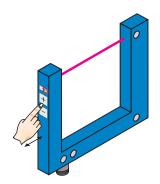
Connection diagram Cd-086



Concept of operation Teach-in via plus/minus buttons (WFxx-B416)

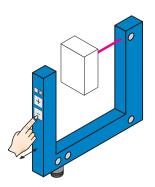
The switching threshold is set automatically. Fine adjustment is possible using the "+"/"-" buttons.

1. No object or substrate in the beam path



Press the "+" and "-" buttons together and hold for 1 second. The red function indicator flashes slowly.

2. Object or label in the beam path



Press the "-" button for 1 second. Red function indicator goes out.

Notes

Material speed = 0 (machine at a standstill).



Once teach-in process is complete, the switching threshold can be adjusted at any time using the "+" or "-" button. To make minor adjustments, press the "+" or "-" button once. To configure settings quickly, keep the "+" or "-" button pressed for longer.



Press both the "+" and "-" buttons together (3 seconds) to lock the device and prevent unintentional actuation.



Recommended accessories

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

	Brief description	Туре	part no.			
connectors ar	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			

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