



WFM180-120P311

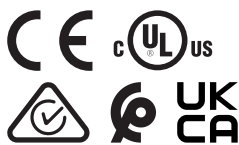
WFM

FORK SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WFM180-120P311	6037837

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

Detailed technical data

Features

Functional principle	Optical detection principle
Dimensions (W x H x D)	10 mm x 200 mm x 141.8 mm
Fork width	180 mm
Fork depth	124 mm
Light source	LED, visible red light
Minimum detectable object (MDO)	1 mm
Adjustment	None
Safety-related parameters	
	MTTF _D 131 years
	DC _{avg} 0 %

Electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	< 10 %
Current consumption	< 20 mA ¹⁾
Initialization time	140 ms
Switching frequency	4 kHz
Response time	
	≤ 125 μs
Stability of response time	± 15 μs
Switching output	PNP
Switching output (voltage)	PNP: HIGH = V _S - ≤ 1.5 V / LOW = 0 V

¹⁾ Without load.

²⁾ Reference voltage DC 50 V.

	NPN: HIGH = approx. V_S / LOW ≤ 1.5 V
Switching mode	Light switching
Output current $I_{\max}$	100 mA
Protection class	III ²⁾
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	Connector M8, 3-pin

¹⁾ Without load.

²⁾ Reference voltage DC 50 V.

Mechanics

Housing material	Aluminum
Weight	Approx. 80 g ... 190 g ¹⁾

¹⁾ Depending on fork width.

Ambient data

Ambient operating temperature	-10 °C ... +60 °C ¹⁾
Ambient temperature, storage	-40 °C ... +80 °C
Ambient light immunity	$\leq 10,000$ lx
Shock load	According to EN 60068-2-27
Enclosure rating	IP67
UL File No.	NRKH.E191603 & NRKH7.E191603

¹⁾ Do not bend below 0 °C.

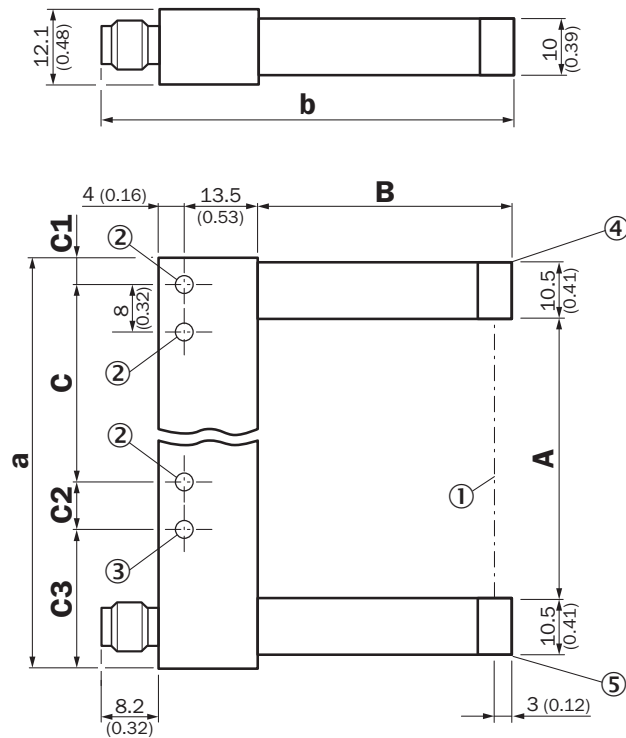
Classifications

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

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

Dimensional drawing



Dimensions in mm (inch)

	A Fork width	B Fork depth	C	C1
WFM30	30 (1.18)	42 (1.65)	30 (1.18)	6.5 (0.26)
WFM50	50 (1.97)	60 (2.36)	40 (1.57)	6.5 (0.26)
WFM80	80 (3.15)	60 (2.36)	70 (2.76)	6.5 (0.26)
WFM120	120 (4.72)	124.3 (4.89)	100 (3.94)	17 (0.67)
WFM180	180 (7.09)	124.3 (4.89)	152 (5.98)	22 (0.87)

	C2	C3	a	b
WFM30	- (-)	- (-)	54 (2.13)	67.7 (2.67)
WFM50	8 (0.31)	19.5 (0.77)	74 (2.91)	85.7 (3.37)
WFM80	8 (0.31)	19.5 (0.77)	104 (4.09)	85.7 (3.37)
WFM120	10 (0.39)	17 (0.67)	144 (5.67)	150.2 (5.91)
WFM180	8 (0.31)	22 (0.87)	204 (8.03)	150.2 (5.91)

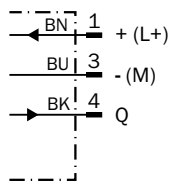
Dimensions in mm (inch)

- ① Optical axis
- ② Mounting hole, $\varnothing$ 4.3 mm
- ③ WFM50/80/120/180
- ④ Transmitted light (red)
- ⑤ Function signal indicator (yellow), switching output

Connection diagram



Connection diagram Cd-045



Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	DOS-0803-G	7902077
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-050VA1XLEAX	2095884

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

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