SICK.COM

DATA SHEET

WFM30-40P111

WFM
Fork sensors

Sensor Intelligence

Illustration may differ

FORK SENSORS

WFM30-40P111

ORDERING INFORMATION

Type	part no.
WFM30-40P111	6052441

Further device versions and accessories at www.sick.com/WFM

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Optical detection principle
Dimensions (W x H x D)	10 mm x 50 mm x 59.5 mm
Fork width	30 mm
Fork depth	42 mm
Light source	LED, visible red light
Minimum detectable object (MDO)	0.8 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 NPN: HIGH = approx. V_S / LOW ≤ 1.5 V
Switching mode	Light switching
Output current $I_{max.}$	100 mA

[1] Without load.

[2] Reference voltage DC 50 V.

Protection class	III [2]
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	Cable, 3-wire, 2 m

[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

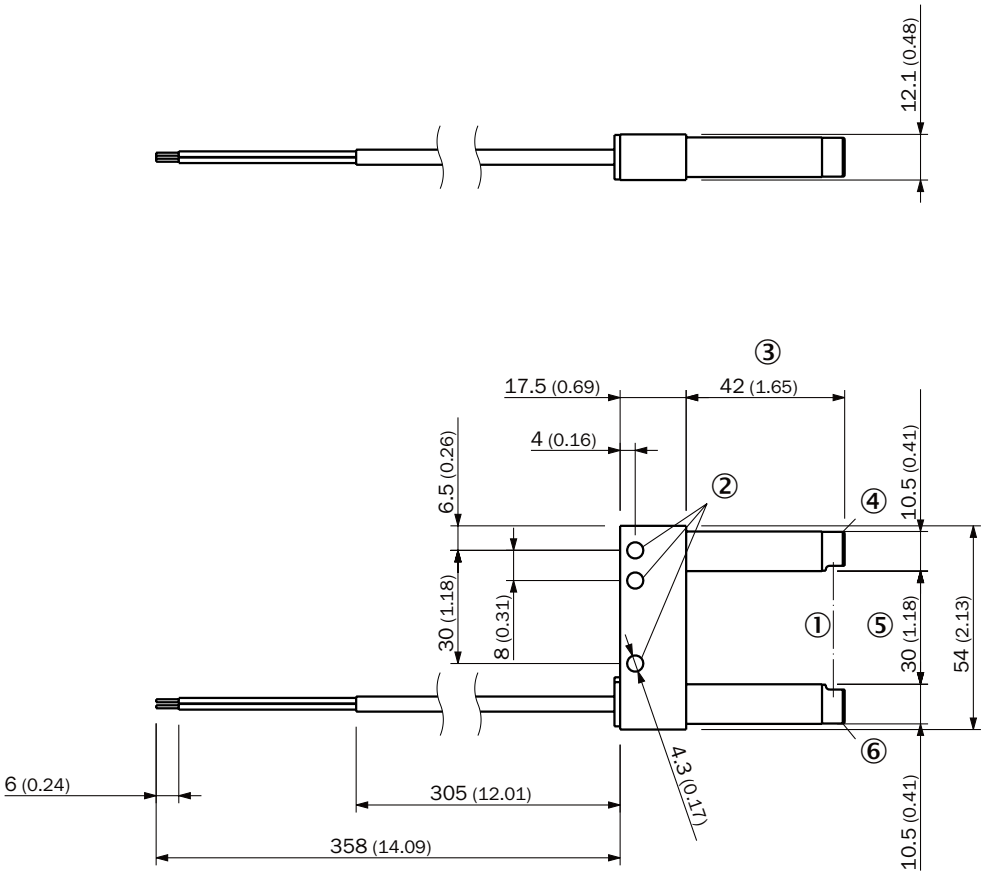
Ambient operating temperature	–10 °C ... +60 °C [1]
Ambient temperature, storage	–40 °C ... +80 °C
Ambient light immunity	≤ 10,000 lx
Shock load	According to EN 60068-2-27
Enclosure rating	IP67
UL File No.	NRKH.E191603 & NRKH7.E191603

[1] Do not bend below 0 °C.

CERTIFICATES

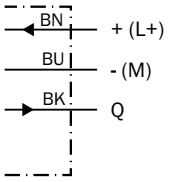
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

DIMENSIONAL DRAWING



Dimensions in mm (inch)
① Optical axis
② Mounting hole, Ø 4.3 mm
③ Fork depth
④ Transmitted light (red)
⑤ Fork width
⑥ Function signal indicator (yellow), switching output

CONNECTION DIAGRAM CD-044



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6052441

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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