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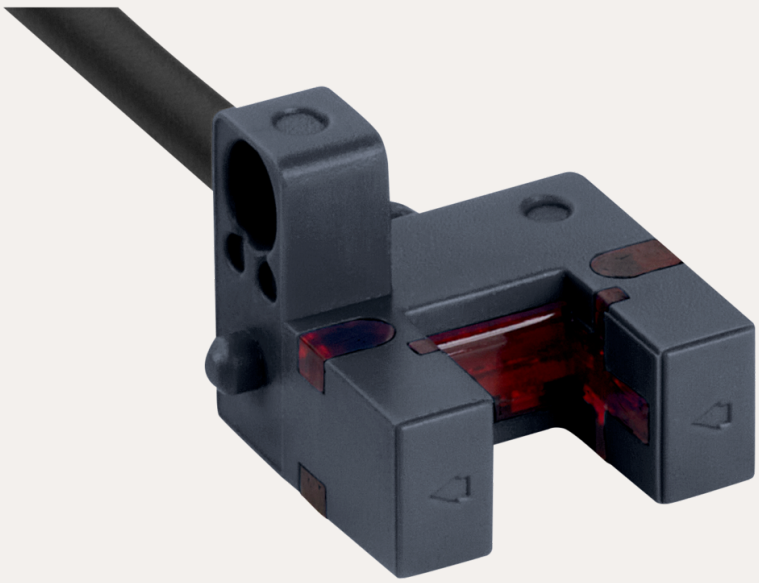


DATA SHEET

MF-R0605P141P10

MF
Fork sensors

SICK
Sensor Intelligence

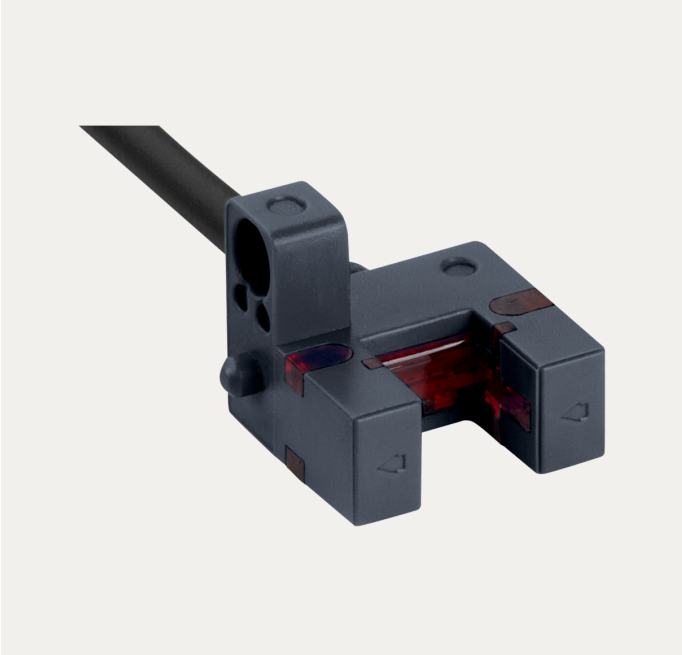


Illustration may differ

FORK SENSORS

MF-R0605P141P10

ORDERING INFORMATION

Type	part no.
MF-R0605P141P10	6091031

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

DETAILED TECHNICAL DATA

FEATURES

Mounting system type	R
Dimensions (W x H x D)	11.7 mm x 14 mm x 14.9 mm
Fork width	6 mm
Fork depth	5 mm
Light source	LED, infrared
Minimum detectable object (MDO)	0.8 mm
Repeatability	0.01 mm
Display	Red LED indicator: Switching output Q_L (Light ON)
Adjustment	None

ELECTRONICS

Supply voltage	5 V DC ... 30 V DC
Ripple	< 10 %
Current consumption	< 10 mA
Initialization time	100 ms
Switching frequency	> 4 kHz
Response time	100 µs
Jitter	28 µs
Switching output	PNP
Switching output (voltage)	High = U_V - < 2 V / Low: ≤ 2 V
Switching mode	Light/dark switching [1) 2)]
Switching output hysteresis	< 0.05 mm
Output current $I_{max.}$	100 mA

[1)] Q1 = light switching.

[2)] Q2 = dark switching.

Protection class	III
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	Cable open end, 4-wire
Connection type Detail	
Length of cable	2 m
Cable material	PVC
Cable diameter	2.7 mm
Conductor cross section	0.08 mm²
Pinouts	
BN	+ (L+)
WH	Q_2 (Dark ON)
BU	- (M)
BK	Q_1 (Light ON)

[1] Q1 = light switching.

[2] Q2 = dark switching.

MECHANICS

Housing material	ABS
Weight	22 g

AMBIENT DATA

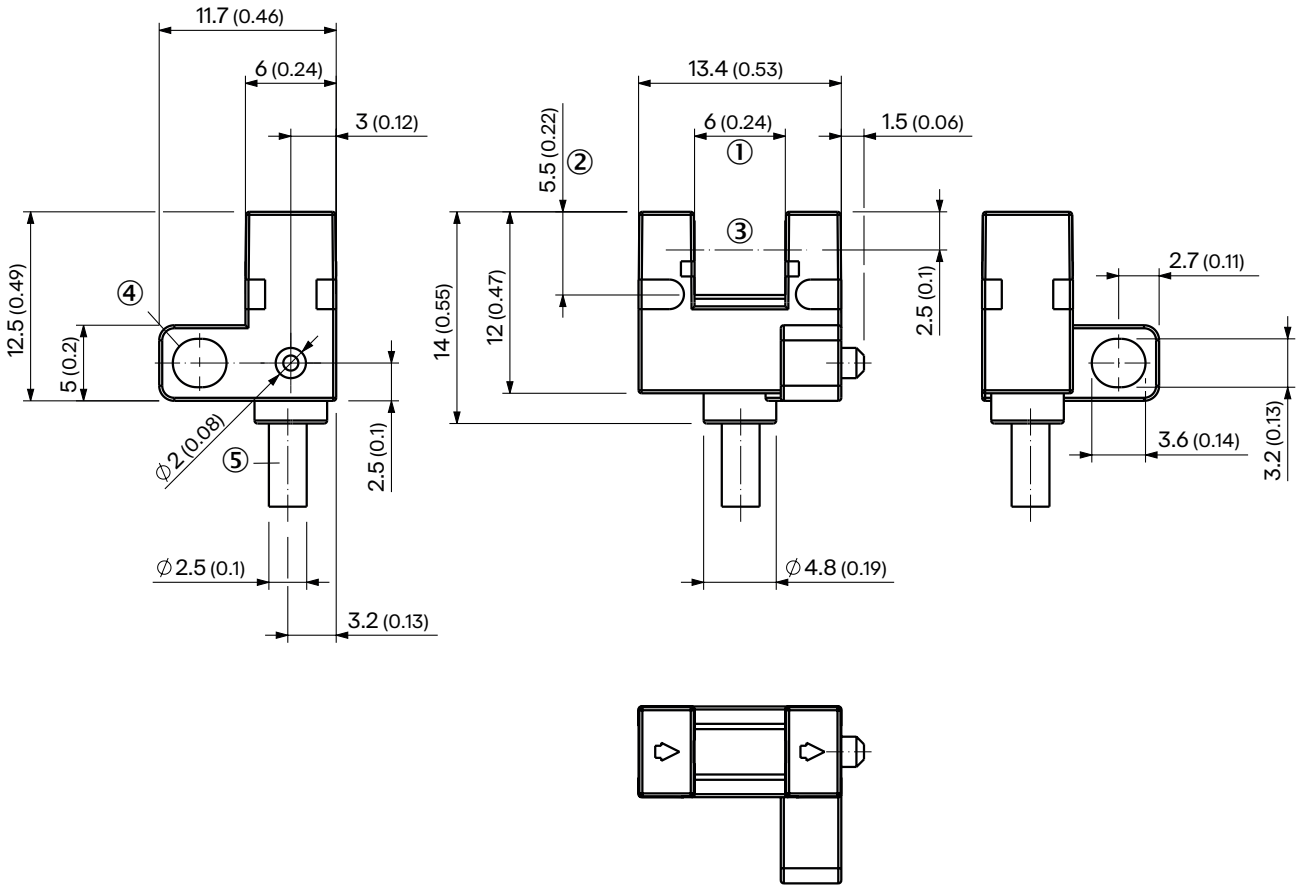
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–30 °C ... +80 °C
Shock load	According to EN 60068-2-27
EMC	EN 60947-5-2 [1]
Enclosure rating	IP67

[1] The sensor complies with the Radio Safety Requirements (EMC) for the industrial sector (Radio Safety Class A). It may cause radio interference if used in a residential area.

CERTIFICATES

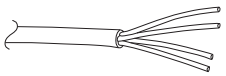
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓
Photobiological safety (IEC EN 62471)	✓

DIMENSIONAL DRAWING, SENSOR



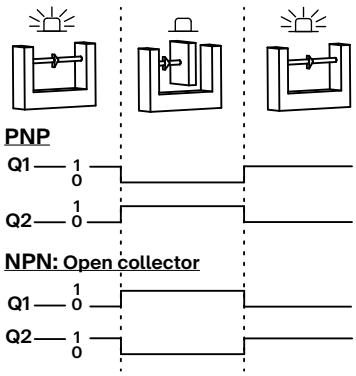
Dimensions in mm (inch)
① Fork width
② Fork depth
③ Detection axis
④ fixing hole
⑤ Cable with flying leads, 4-wire, AWG 28, 0.09 mm²

PINOUTS, SEE TABLE TECHNICAL DATA: ELECTRONICS

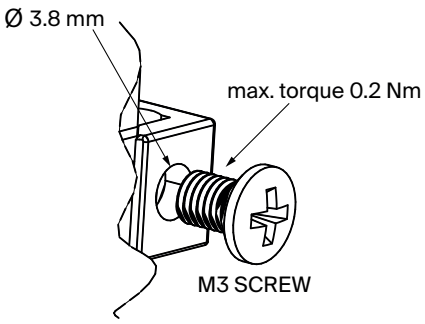


Cable with flying leads, 4-wire, AWG 28, 0.09 mm²

STATUS OF DIGITAL OUTPUT



ASSEMBLY NOTE



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/6091031

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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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