



MF-U0605N141P10

MF

**FORK SENSORS**

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
MF-U0605N141P10	6091032

Other models and accessories → [www.sick.com/MF](http://www.sick.com/MF)

Illustration may differ



### Detailed technical data

#### Features

<b>Mounting system type</b>	U
<b>Dimensions (W x H x D)</b>	6 mm x 16 mm x 13.4 mm
<b>Fork width</b>	6 mm
<b>Fork depth</b>	5 mm
<b>Light source</b>	LED, infrared
<b>Minimum detectable object (MDO)</b>	0.8 mm
<b>Repeatability</b>	0.01 mm
<b>Display</b>	Red LED indicator: Switching output Q <sub>1</sub> (Light ON)
<b>Adjustment</b>	None

#### Electronics

<b>Supply voltage</b>	5 V DC ... 30 V DC
<b>Ripple</b>	< 10 %
<b>Current consumption</b>	< 10 mA
<b>Initialization time</b>	100 ms
<b>Switching frequency</b>	> 4 kHz
<b>Response time</b>	100 μs
<b>Jitter</b>	28 μs
<b>Switching output</b>	NPN <sup>1)</sup>
<b>Switching output (voltage)</b>	High = U <sub>V</sub> - < 2 V / Low: ≤ 2 V
<b>Switching mode</b>	Light/dark switching <sup>2) 3)</sup>
<b>Switching output hysteresis</b>	< 0.05 mm
<b>Output current I<sub>max.</sub></b>	100 mA
<b>Protection class</b>	III

<sup>1)</sup> Open Collector.

<sup>2)</sup> Q<sub>1</sub> = light switching.

<sup>3)</sup> Q<sub>2</sub> = dark switching.

<b>Circuit protection</b>	U <sub>V</sub> connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>Connection type</b>	
	Cable open end, 4-wire
<b>Connection type Detail</b>	
Length of cable	2 m
Cable material	PVC
Cable diameter	2.7 mm
Conductor cross section	0.08 mm <sup>2</sup>
<b>Pinouts</b>	
BN	+ (L+)
WH	Q <sub>2</sub> (Dark ON)
BU	- (M)
BK	Q <sub>1</sub> (Light ON)

<sup>1)</sup> Open Collector.

<sup>2)</sup> Q<sub>1</sub> = light switching.

<sup>3)</sup> Q<sub>2</sub> = dark switching.

## Mechanics

<b>Housing material</b>	ABS
<b>Weight</b>	22 g

## Ambient data

<b>Ambient operating temperature</b>	-25 °C ... +55 °C
<b>Ambient temperature, storage</b>	-30 °C ... +80 °C
<b>Shock load</b>	According to EN 60068-2-27
<b>EMC</b>	EN 60947-5-2 <sup>1)</sup>
<b>Enclosure rating</b>	IP67

<sup>1)</sup> 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.

## Classifications

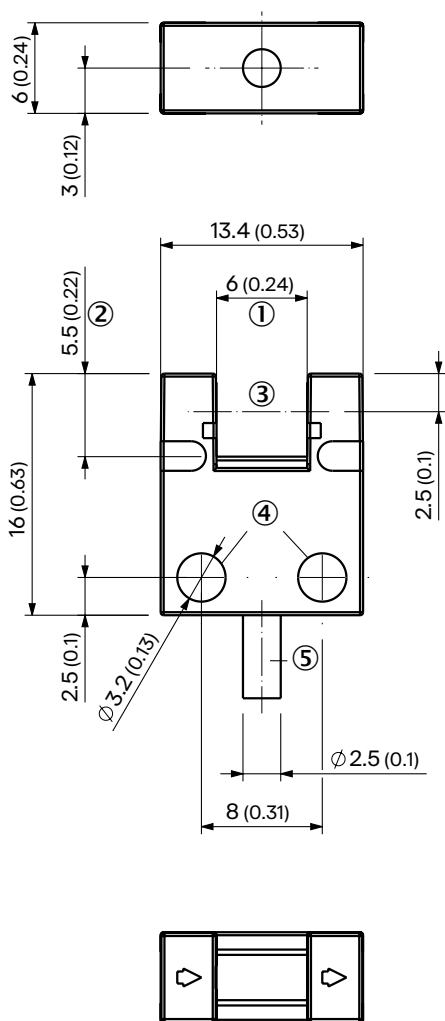
<b>ECLASS 5.0</b>	27270909
<b>ECLASS 5.1.4</b>	27270909
<b>ECLASS 6.0</b>	27270909
<b>ECLASS 6.2</b>	27270909
<b>ECLASS 7.0</b>	27270909
<b>ECLASS 8.0</b>	27270909
<b>ECLASS 8.1</b>	27270909
<b>ECLASS 9.0</b>	27270909
<b>ECLASS 10.0</b>	27270909
<b>ECLASS 11.0</b>	27270909
<b>ECLASS 12.0</b>	27270909
<b>ETIM 5.0</b>	EC002720

<b>ETIM 6.0</b>	EC002720
<b>ETIM 7.0</b>	EC002720
<b>ETIM 8.0</b>	EC002720
<b>UNSPSC 16.0901</b>	39121528

### Certificates

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

### Dimensional drawing, sensor

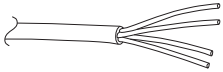


Dimensions in mm (inch)

① Fork width

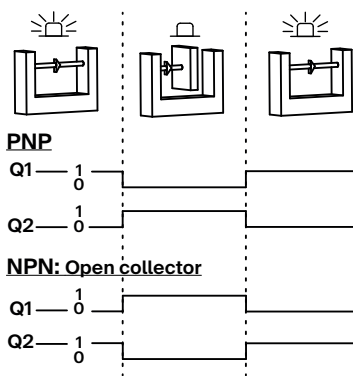
- ② Fork depth
- ③ Detection axis
- ④ fixing hole
- ⑤ Cable with flying leads, 4-wire, AWG 28, 0.09 mm<sup>2</sup>

Pinouts, see table [Technical data: Electronics](#)

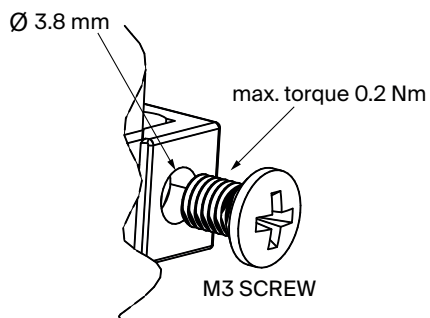


Cable with flying leads, 4-wire, AWG 28, 0.09 mm<sup>2</sup>

### Status of digital output



### Assembly note



## 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](http://www.sick.com)