





### Ordering information

Type	Part no.
IN40-D0304K	6037684

The safety-related parameters will be changing soon. This means that the devices will conform to Category 3 as well as PFH<sub>D</sub>  $1.0 \times 10^{-8}$ . Please check whether the device meets the safety requirements of your application as a result. If you have any questions, please consult your sales organization.

Other models and accessories → [www.sick.com/IN4000\\_Standard](http://www.sick.com/IN4000_Standard)



### Detailed technical data

#### Features

<b>Sensor principle</b>	Inductive
<b>Number of safe outputs</b>	1
<b>Switching delay from state change</b>	T <sub>2</sub> + 20 ms <sup>1)</sup>
<b>Enable zone</b>	1 mm ... 4 mm <sup>2)</sup>
<b>Safe switch off distance S<sub>ar</sub></b>	10 mm <sup>2)</sup>
<b>Actuation directions</b>	5
<b>Active sensor surfaces</b>	1
<b>Monitoring time minimum dwell time</b>	≥ 0.2 s

<sup>1)</sup> During this time the output is switched off (Logical "0"), see response range.

<sup>2)</sup> Dependent on material. The indicated values refer to steel ST37.

#### Safety-related parameters

<b>Safety integrity level</b>	SIL3 (IEC 61508)
<b>Category</b>	Category 4 (EN ISO 13849)
<b>Performance level</b>	PL e (EN ISO 13849)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	$1.33 \times 10^{-9}$ (EN ISO 13849)
<b>T<sub>M</sub> (mission time)</b>	10 years (EN ISO 13849) <sup>1)</sup> 20 years (EN ISO 13849) <sup>2)</sup>
<b>Type</b>	Type 3 (EN ISO 14119)
<b>Actuator coding level</b>	Uncoded (EN ISO 14119)
<b>Classification in compliance with IEC/EN 60947-5-3</b>	PDF-M

<sup>1)</sup> At -25 °C ... +70 °C and 5 % ... 95 % relative air humidity.

<sup>2)</sup> At +10 °C ... +40 °C and 5 % ... 70 % relative air humidity.

#### Functions

<b>Cascading</b>	✓
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#### Interfaces

<b>Connection type</b>	Plug connector, M12, 4-pin
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<b>Power indication</b>	✓
<b>Status display</b>	✓

## Electrical data

<b>Protection class</b>	III (EN 50178)
<b>Supply voltage <math>V_s</math></b>	24 V DC (19.2 V DC ... 30 V DC)
<b>Power consumption</b>	15 mA
<b>Type of output</b>	Semiconductor, pulsed

## Mechanical data

<b>Design</b>	Cylindrical
<b>Housing diameter</b>	M18
<b>Weight</b>	0.06 kg
<b>Housing material</b>	Specially coated brass (housing), PBT (cover)
<b>Installation type</b>	Flush

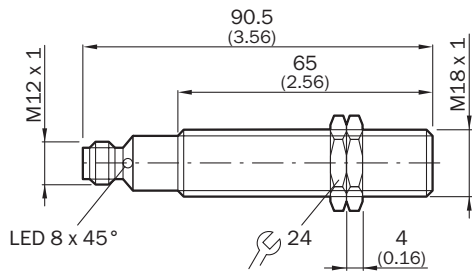
## Ambient data

<b>Enclosure rating</b>	IP69K (IEC 60529)
<b>Ambient operating temperature</b>	-25 °C ... +70 °C
<b>Storage temperature</b>	-25 °C ... +70 °C
<b>Vibration resistance</b>	10 Hz ... 55 Hz, 1 mm (EN 60947-5-3)
<b>Shock resistance</b>	30 g, 11 ms (EN 60947-5-3)

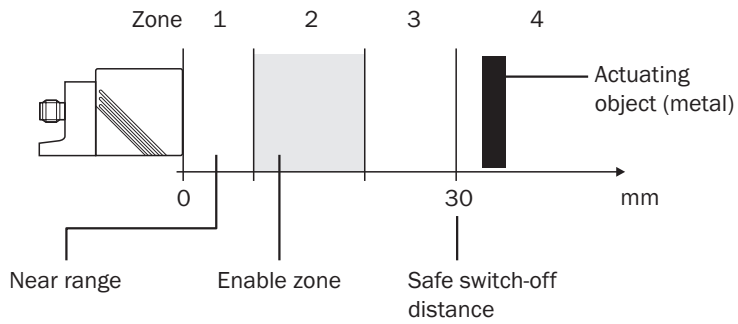
## Classifications

<b>ECl@ss 5.0</b>	27272401
<b>ECl@ss 5.1.4</b>	27272401
<b>ECl@ss 6.0</b>	27272401
<b>ECl@ss 6.2</b>	27272401
<b>ECl@ss 7.0</b>	27272401
<b>ECl@ss 8.0</b>	27272401
<b>ECl@ss 8.1</b>	27272401
<b>ECl@ss 9.0</b>	27272401
<b>ETIM 5.0</b>	EC001818
<b>ETIM 6.0</b>	EC001818
<b>UNSPSC 16.0901</b>	39122205

### Dimensional drawing (Dimensions in mm (inch))

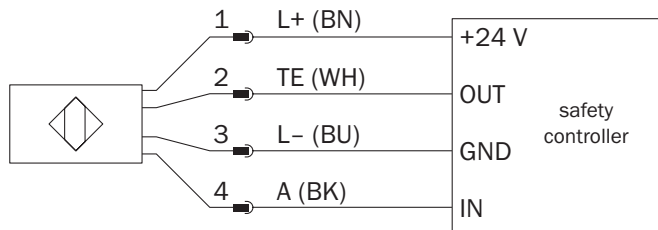
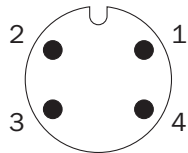


### Response range



### Connection diagram

Sensor connections



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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.

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