



# IN40-D0304K

IN4000 Standard

NON-CONTACT SAFETY SWITCHES

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
IN40-D0304K	6037684

The devices 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>Housing diameter</b>	M18
<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 3 (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>	$1.0 \times 10^{-8}$
<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>Safe series connection</b>	With T-connector (without diagnostics)
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## Interfaces

<b>Connection type</b>	Plug connector, M12, 4-pin
Coupling nut material	Brass, special coating
<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>Housing length</b>	90.5 mm
<b>Thread length</b>	65 mm
<b>Weight</b>	0.06 kg
<b>Material</b>	
Housing	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

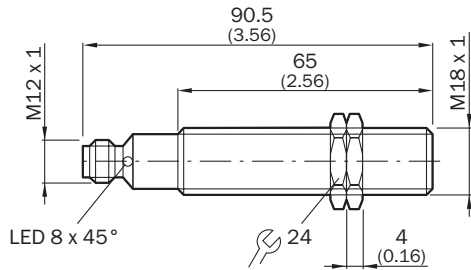
<b>eCl@ss 5.0</b>	27272401
<b>eCl@ss 5.1.4</b>	27272401
<b>eCl@ss 6.0</b>	27272401
<b>eCl@ss 6.2</b>	27272401
<b>eCl@ss 7.0</b>	27272401
<b>eCl@ss 8.0</b>	27272401
<b>eCl@ss 8.1</b>	27272401
<b>eCl@ss 9.0</b>	27272401
<b>eCl@ss 10.0</b>	27272401
<b>eCl@ss 11.0</b>	27272401
<b>eCl@ss 12.0</b>	27274101

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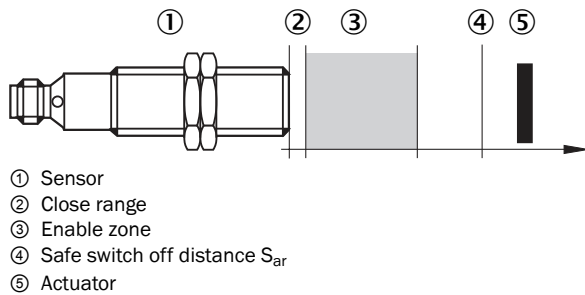
NON-CONTACT SAFETY SWITCHES

<b>ETIM 5.0</b>	EC001818
<b>ETIM 6.0</b>	EC001818
<b>ETIM 7.0</b>	EC001818
<b>ETIM 8.0</b>	EC001818
<b>UNSPSC 16.0901</b>	39122205

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

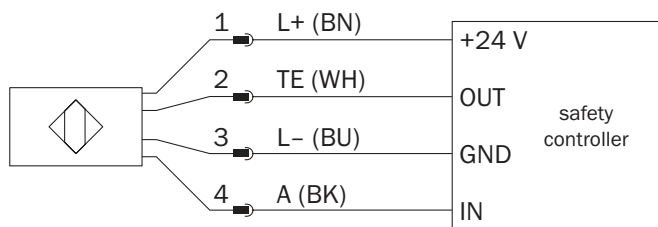
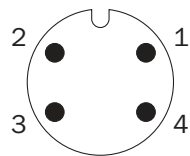


## Response range



## Pin assignment

Sensor connections



## 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)