



# IN40-D0101K

IN4000 Standard

NON-CONTACT SAFETY SWITCHES

**SICK**  
Sensor Intelligence.

Ordering information



| Type        | part no. |
|-------------|----------|
| IN40-D0101K | 6027389  |

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



Detailed technical data

Features

|                                             |                               |
|---------------------------------------------|-------------------------------|
| Sensor principle                            | Inductive                     |
| Number of safe outputs                      | 1                             |
| Switching delay from state change           | T2 + 20 ms <sup>1)</sup>      |
| Enable zone                                 | 10 mm ... 15 mm <sup>2)</sup> |
| Assured switch off distance S <sub>ar</sub> | 30 mm <sup>2)</sup>           |
| Actuation directions                        | 5                             |
| Active sensor surfaces                      | 1                             |
| Monitoring time minimum dwell time          | ≥ 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

|                                                                     |                                                                                |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Safety integrity level                                              | SIL 3 (IEC 61508)                                                              |
| Category                                                            | Category 3 (EN ISO 13849)                                                      |
| Performance level                                                   | PL e (EN ISO 13849)                                                            |
| PFH <sub>D</sub> (mean probability of a dangerous failure per hour) | 1.0 x 10 <sup>-8</sup>                                                         |
| T <sub>M</sub> (mission time)                                       | 10 years (EN ISO 13849) <sup>1)</sup><br>20 years (EN ISO 13849) <sup>2)</sup> |
| Type                                                                | Type 3 (EN ISO 14119)                                                          |
| Actuator coding level                                               | Uncoded (EN ISO 14119)                                                         |
| Classification in compliance with IEC/ EN 60947-5-3                 | 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

|                        |                                        |
|------------------------|----------------------------------------|
| Safe series connection | With T-connector (without diagnostics) |
|------------------------|----------------------------------------|

## Interfaces

|                         |                            |
|-------------------------|----------------------------|
| <b>Connection type</b>  | Plug connector, M12, 4-pin |
| Coupling nut material   | Brass                      |
| <b>Display elements</b> | LEDs                       |
| Power indication        | ✓                          |
| Status display          | ✓                          |

## Electronics

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

## Mechanics

|                          |                                      |
|--------------------------|--------------------------------------|
| <b>Design</b>            | Rectangular                          |
| <b>Weight</b>            | 0.22 kg                              |
| <b>Material</b>          |                                      |
| Housing                  | Zinc die cast (housing), PPE (cover) |
| <b>Installation type</b> | Non-flush                            |

## Ambient data

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Enclosure rating</b>              | IP67 (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)           |

## Certificates

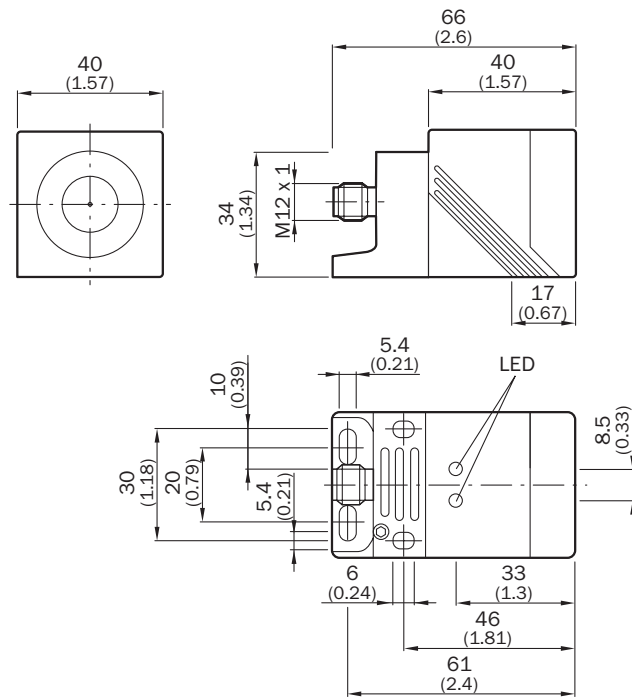
|                                           |   |
|-------------------------------------------|---|
| <b>EU declaration of conformity</b>       | ✓ |
| <b>UK declaration of conformity</b>       | ✓ |
| <b>ACMA declaration of conformity</b>     | ✓ |
| <b>Moroccan declaration of conformity</b> | ✓ |
| <b>China RoHS</b>                         | ✓ |
| <b>cULus certificate</b>                  | ✓ |
| <b>TÜV approval</b>                       | ✓ |
| <b>TÜV approval annex</b>                 | ✓ |

## Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27272401 |
| <b>ECLASS 5.1.4</b> | 27272401 |
| <b>ECLASS 6.0</b>   | 27272401 |
| <b>ECLASS 6.2</b>   | 27272401 |
| <b>ECLASS 7.0</b>   | 27272401 |
| <b>ECLASS 8.0</b>   | 27272401 |

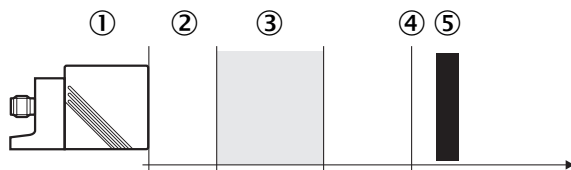
|                       |          |
|-----------------------|----------|
| <b>ECLASS 8.1</b>     | 27272401 |
| <b>ECLASS 9.0</b>     | 27272401 |
| <b>ECLASS 10.0</b>    | 27272401 |
| <b>ECLASS 11.0</b>    | 27272401 |
| <b>ECLASS 12.0</b>    | 27274101 |
| <b>ETIM 5.0</b>       | EC001818 |
| <b>ETIM 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)

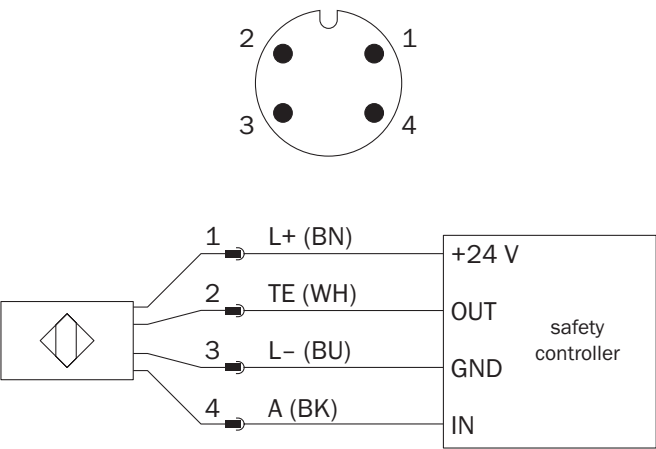
### Response range



- ① sensor
- ② Close range
- ③ enable zone
- ④ assured switch off distance  $S_{ar}$
- ⑤

⑤ actuator

Pinouts 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)