



# IME

THE ECONOMICAL STANDARD FOR USE  
IN INDUSTRIAL ENVIRONMENTS

Inductive proximity sensors

**SICK**  
Sensor Intelligence.



The classic solution for industrial use –  
now with triple sensing range

## ALL GOOD THINGS COME IN THREES

When you need a bit “more” from your sensing range, the new inductive IME sensors with triple sensing range are the best choice in the industrial environment.

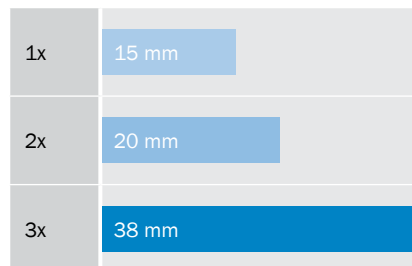
We have significantly expanded the sensing range, which means that the distance to moving objects can be increased and mechanical damage avoided. This increases the reliability of machines and systems. Whether it's steel, stainless steel, aluminum, or copper, with the IME sensors with triple sensing range, your materials are always reliably detected, even from a great distance. The high detection sensitivity also enables hard-to-recognize parts, such as small screws, wires, or thin sheets, to be detected. The increased sensing range not only enables greater tolerances in the machine design, it also saves space. Compared to standard sensors, for the same sensing range, IME sensors require less installation space, opening up new saving potentials.

### Application areas

With maximum performance, the IME sensors are clear price-performance victors in many different application areas:

- Handling and assembly machines
- Textile machinery
- Packaging machines
- Conventional machine building
- Storage and conveyor systems

### Scanning ranges at different sensing ranges



### The benefits at a glance

- Performance that pays off
- Higher machine availability
- Large operating reserve due to triple sensing range
- Lower risk of mechanical damage due to a greater distance from moving parts
- Less space required for the same sensing range when compared with standard sensors
- Easy detection of difficult devices

In order to meet a wide range of requirements, IME sensors are available with the following sensing ranges:

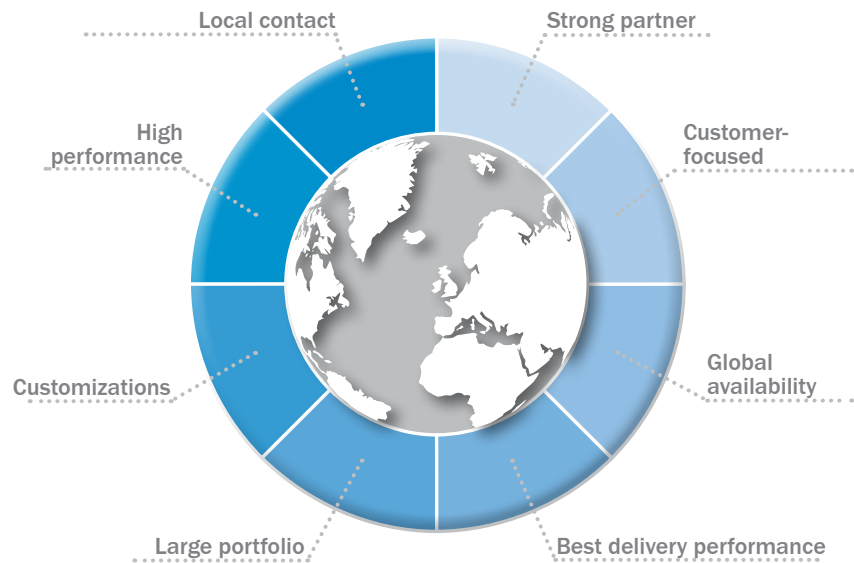
| Product         | Sensing range (mm) | Page |
|-----------------|--------------------|------|
| M08 quasi-flush | 3 mm               | → 5  |
| M08 non-flush   | 6 mm               | → 5  |
| M12 quasi-flush | 8 mm               | → 13 |
| M12 non-flush   | 10 mm              | → 13 |
| M18 quasi-flush | 12 mm              | → 19 |
| M18 non-flush   | 20 mm              | → 19 |
| M30 quasi-flush | 20 mm              | → 25 |
| M30 non-flush   | 38 mm              | → 25 |

## SICK – WE HAVE UNDERSTOOD

In addition to their high performance, the inductive sensors by SICK are simply perfect all-rounders. Global availability, optimum delivery performance and a large portfolio characterize the inductive sensors – and make SICK the right partner.

If the right sensor is not available despite the large product range, customizations provide an even higher degree of flexibility. Our aim is give you the right sensor for your application – at the right time.

Even when it is a tricky task. Thanks to a global support network in over 88 countries, SICK can always work with you to find a solution.



As a major player in automation technology, partnership with SICK offers a variety of benefits. We are committed to driving innovation in the industry, even in areas neglected by others – and we want to do this on a global scale in all sectors. Our global network of production plants

with unified quality standards guarantees a safe and reliable supply. Our elaborate logistics concept ensures rapid availability on site, regardless of which of our over 40,000 products you require. The individual needs of our customers are paramount to SICK.

Our local sales department will advise and support you with your automation projects. Together with our regional development and competence centers, we will always create a solution which adds value for our customers.

## THE ECONOMICAL STANDARD FOR USE IN INDUSTRIAL ENVIRONMENTS



### Additional information

|                               |    |
|-------------------------------|----|
| Detailed technical data ..... | 5  |
| Ordering information .....    | 6  |
| Dimensional drawings .....    | 7  |
| Connection diagram .....      | 8  |
| Installation note .....       | 9  |
| Recommended accessories ..... | 10 |

### Product description

SICK's inductive sensors offer precise detection, less downtime, and a long service life. The IME inductive sensors pack high technology into the smallest of spaces. The integrated ASIC chip enables digital adjustment after the end of the manufacturing process. The saving of values in the ASIC ensures highly precise switching points and very high

repeatability of values – for any number of production runs. IME sensors are completely encapsulated with hot melt technology, which increases these sensors' life under shock and vibration. The customer benefits from high positioning accuracy in the machine and long-term sensor reliability.

### At a glance

- Type: M08
- Extended sensing range: 3 mm to 6 mm
- Electrical wiring: DC 3-wire
- Enclosure rating: IP 67
- Temperature range: -25 °C to 75 °C
- Nickel-plated brass housing, plastic sensing face

### Your benefits

- Reliable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life
- High level of cost-effectiveness thanks to low acquisition costs
- Comprehensive standard product portfolio
- Easy to implement customer-specific variants within the standard product portfolio

→ [www.mysick.com/en/IME08](http://www.mysick.com/en/IME08)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

### Features

|                                               | Quasi-flush                   | Non-flush |
|-----------------------------------------------|-------------------------------|-----------|
| <b>Housing</b>                                | Cylindrical                   |           |
| <b>Thread size</b>                            | M8 x 1                        |           |
| <b>Sensing range <math>S_n</math></b>         | 3 mm                          | 6 mm      |
| <b>Assured sensing range <math>S_a</math></b> | 2.43 mm                       | 4.86 mm   |
| <b>Installation type</b>                      | Quasi-flush                   | Non-flush |
| <b>Switching frequency</b>                    | 1,000 Hz                      | 500 Hz    |
| <b>Output type</b>                            | PNP / NPN (depending on type) |           |
| <b>Output function</b>                        | NO / NC (depending on type)   |           |
| <b>Electrical wiring</b>                      | DC 3-wire                     |           |
| <b>Enclosure rating <sup>1)</sup></b>         | IP 67                         |           |

<sup>1)</sup> According to EN 60529.

### Mechanics/electronics

|                                                |                                                                                     |
|------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Supply voltage</b>                          | 10 V DC ... 30 V DC                                                                 |
| <b>Ripple</b>                                  | ≤ 10 %                                                                              |
| <b>Voltage drop <sup>1)</sup></b>              | ≤ 2 V                                                                               |
| <b>Current consumption</b>                     | ≤ 10 mA                                                                             |
| <b>Time delay before availability</b>          | ≤ 50 ms                                                                             |
| <b>Hysteresis</b>                              | 1 % ... 15 %                                                                        |
| <b>Repeatability <sup>3) 4)</sup></b>          | ≤ 5 %                                                                               |
| <b>Temperature drift (of <math>S_r</math>)</b> | ± 10 %                                                                              |
| <b>EMC</b>                                     | According to EN 60947-5-2                                                           |
| <b>Continuous current <math>I_a</math></b>     | ≤ 200 mA                                                                            |
| <b>Current consumption, no load</b>            | ≤ 10 mA                                                                             |
| <b>Connection type</b>                         | Cable, 2 m, PVC<br>Male connector, M8<br>Male connector, M12<br>(depending on type) |
| <b>Short-circuit protection</b>                | ✓                                                                                   |
| <b>Reverse polarity protection</b>             | ✓                                                                                   |
| <b>Power-up pulse protection</b>               | ✓                                                                                   |
| <b>Shock and vibration resistance</b>          | 30 g, 11 ms/10 Hz ... 55 Hz, 1 mm                                                   |
| <b>Ambient operating temperature</b>           | -25 °C ... +75 °C                                                                   |
| <b>Ambient storage temperature</b>             | -25 °C ... +75 °C                                                                   |
| <b>Housing material</b>                        | Metal, Nickel-plated brass                                                          |
| <b>Housing cap material</b>                    | Plastic, PA6                                                                        |
| <b>Tightening torque, max.</b>                 | Typ. 5 Nm                                                                           |

<sup>1)</sup> At  $I_a$  max.

<sup>2)</sup> Without load.

<sup>3)</sup>  $U_b$  and  $T_a$  constant.

<sup>4)</sup> Of  $S_r$ .

## Reduction factors

|                                   | Quasi-flush                                    | Non-flush    |
|-----------------------------------|------------------------------------------------|--------------|
| <b>Note</b>                       | The values are reference values which may vary |              |
| <b>St37 steel (Fe)</b>            | Approx. 1                                      | Approx. 1    |
| <b>Stainless steel (V2A, 304)</b> | Approx. 0.75                                   | Approx. 0.68 |
| <b>Aluminum (Al)</b>              | Approx. 0.46                                   | Approx. 0.45 |
| <b>Copper (Cu)</b>                | Approx. 0.42                                   | Approx. 0.39 |
| <b>Brass (Br)</b>                 | Approx. 0.56                                   | Approx. 0.49 |

## Ordering information

### IME08

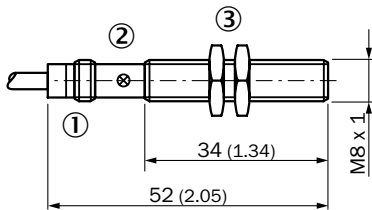
- **Electrical wiring:** DC 3-wire

| Housing | Sensing range $S_n$ | Installation type | Output function | Output type | Connection              | Housing    | Connection diagram | Model name      | Part no. |
|---------|---------------------|-------------------|-----------------|-------------|-------------------------|------------|--------------------|-----------------|----------|
| M8 x 1  | 3 mm                | Quasi-flush       | NO              | NPN         | Connector M12, 4-pin    | Standard   | Cd-007             | IME08-03BNSZC0S | 1074031  |
|         |                     |                   |                 |             | Connector M8, 3-pin     | Short-body | Cd-002             | IME08-03BNSZT0K | 1074040  |
|         |                     |                   |                 |             |                         | Standard   | Cd-002             | IME08-03BNSZT0S | 1073663  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME08-03BNSZW2K | 1074009  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME08-03BNSZW2S | 1074044  |
|         |                     |                   |                 | PNP         | Connector M12, 4-pin    | Standard   | Cd-007             | IME08-03BPSZC0S | 1074029  |
|         |                     |                   |                 |             | Connector M8, 3-pin     | Short-body | Cd-002             | IME08-03BPSZT0K | 1074037  |
|         |                     |                   |                 |             |                         | Standard   | Cd-002             | IME08-03BPSZT0S | 1073457  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME08-03BPSZW2K | 1074007  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME08-03BPSZW2S | 1074042  |
|         |                     |                   | NC              | NPN         | Connector M8, 3-pin     | Short-body | Cd-004             | IME08-03BNOZT0K | 1074041  |
|         |                     |                   |                 |             |                         | Standard   | Cd-004             | IME08-03BNOZT0S | 1074026  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME08-03BNOZW2K | 1074035  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME08-03BNOZW2S | 1074045  |
|         |                     |                   |                 | PNP         | Connector M12, 4-pin    | Standard   | Cd-008             | IME08-03BPOZC0S | 1074030  |
|         |                     |                   |                 |             | Connector M8, 3-pin     | Short-body | Cd-004             | IME08-03BPOZT0K | 1074038  |
|         |                     |                   |                 |             |                         | Standard   | Cd-004             | IME08-03BPOZT0S | 1073662  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME08-03BPOZW2K | 1074008  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME08-03BPOZW2S | 1074043  |

| Housing | Sensing range $S_n$ | Installation type | Output function | Output type | Connection              | Housing    | Connection diagram | Model name      | Part no. |
|---------|---------------------|-------------------|-----------------|-------------|-------------------------|------------|--------------------|-----------------|----------|
| M8 x 1  | 6 mm                | Non-flush         | NO              | NPN         | Connector M8, 3-pin     | Short-body | Cd-002             | IME08-06NNSZT0K | 1071202  |
|         |                     |                   |                 |             |                         | Standard   | Cd-002             | IME08-06NNSZT0S | 1071210  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME08-06NNSZW2K | 1071198  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME08-06NNSZW2S | 1071206  |
|         |                     |                   |                 | PNP         | Connector M12, 4-pin    | Standard   | Cd-007             | IME08-06NPSZC0S | 1071213  |
|         |                     |                   |                 |             | Connector M8, 3-pin     | Short-body | Cd-002             | IME08-06NPSZT0K | 1071200  |
|         |                     |                   |                 |             |                         | Standard   | Cd-002             | IME08-06NPSZT0S | 1071208  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME08-06NPSZW2K | 1071195  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME08-06NPSZW2S | 1071204  |
|         |                     |                   | NC              | NPN         | Connector M8, 3-pin     | Short-body | Cd-004             | IME08-06NNOZT0K | 1071203  |
|         |                     |                   |                 |             |                         | Standard   | Cd-004             | IME08-06NNOZT0S | 1071211  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME08-06NNOZW2K | 1071199  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME08-06NNOZW2S | 1071207  |
|         |                     |                   |                 | PNP         | Connector M12, 4-pin    | Standard   | Cd-008             | IME08-06NPOZC0S | 1071212  |
|         |                     |                   |                 |             | Connector M8, 3-pin     | Short-body | Cd-004             | IME08-06NPOZT0K | 1071201  |
|         |                     |                   |                 |             |                         | Standard   | Cd-004             | IME08-06NPOZT0S | 1071209  |
|         |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME08-06NPOZW2K | 1071196  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME08-06NPOZW2S | 1071205  |

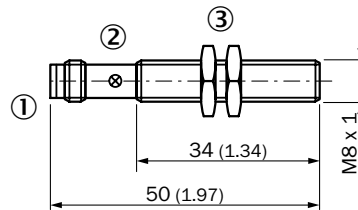
### Dimensional drawings (Dimensions in mm (inch))

IME08 Standard, cable, flush



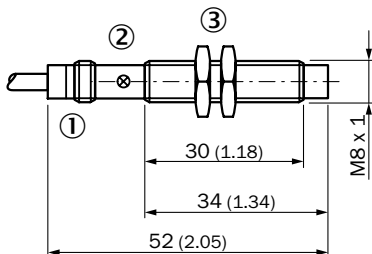
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Standard, connector, flush



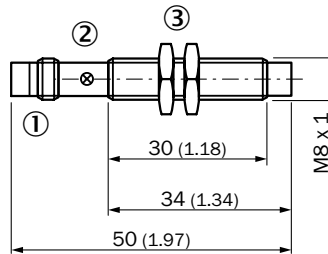
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Standard, cable, non-flush



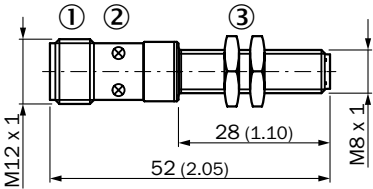
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Standard, connector, non-flush



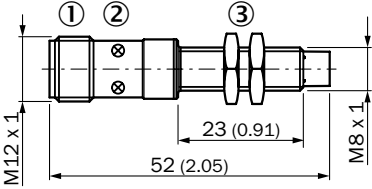
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Standard, connector, M12, flush



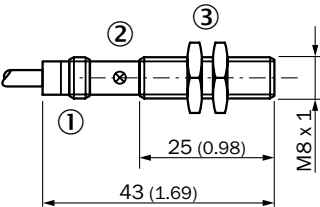
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Standard, connector M12, non-flush



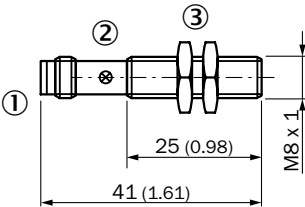
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Short-body housing, cable, flush



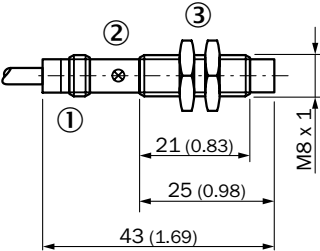
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Short-body housing, connector, flush



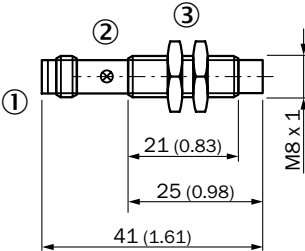
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

IME08 Short-body housing, cable, non-flush



- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

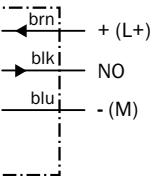
IME08 Short-body housing, connector, non-flush



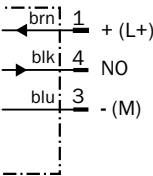
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 13, metal

## Connection diagram

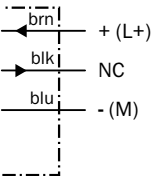
Cd-001



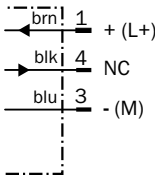
Cd-002



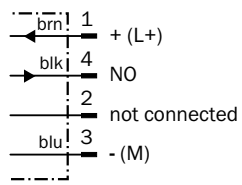
Cd-003



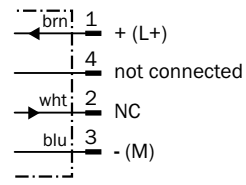
Cd-004



Cd-007

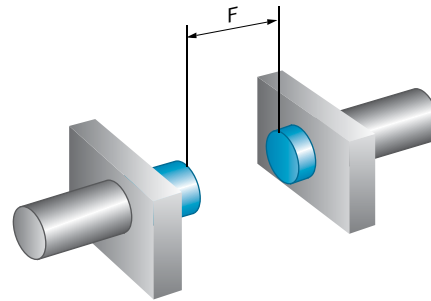
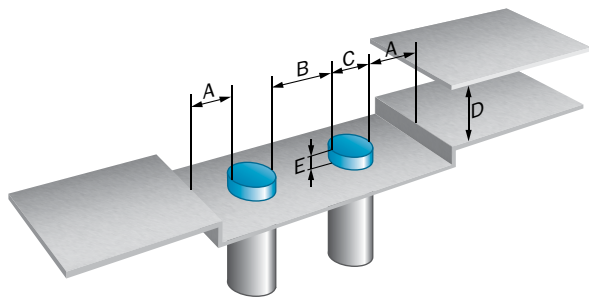


Cd-008

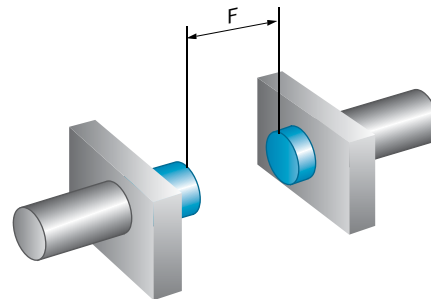
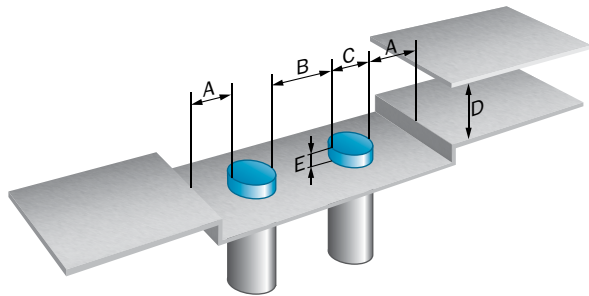


## Installation note

### Quasi-flush installation



### Non-flush installation



## Installation note

|                 | Installation type | Sensing range Sn | A     | B     | C    | D     | E     | F     |
|-----------------|-------------------|------------------|-------|-------|------|-------|-------|-------|
| IME08-03Bxxxxxx | Quasi-flush       | 3 mm             | 3 mm  | 20 mm | 8 mm | 9 mm  | 1 mm  | 30 mm |
| IME08-06Nxxxxxx | Non-flush         | 6 mm             | 16 mm | 30 mm | 8 mm | 18 mm | 10 mm | 60 mm |

## Recommended accessories

### Mounting systems

#### Mounting brackets

| Figure                                                                            | Material           | Description                   | Type       | Part no. |
|-----------------------------------------------------------------------------------|--------------------|-------------------------------|------------|----------|
|  | Steel, zinc coated | Mounting plate for M8 sensors | BEF-WG-M08 | 5321722  |
|  |                    | Mounting bracket, M8 thread   | BEF-WN-M08 | 5321721  |

#### Terminal brackets

| Figure                                                                            | Material                               | Description                                             | Type        | Part no. |
|-----------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------|-------------|----------|
|  | Plastic (PA12), glass-fiber reinforced | Clamping block for round sensors M8, without fixed stop | BEF-KH-M08  | 2051477  |
|                                                                                   |                                        | Clamping block for round sensors M8, with fixed stop    | BEF-KHF-M08 | 2051478  |

### Connection systems

#### Connecting cables with female connector, M12, 4-pin

- **Cable material:** PVC
- **Connector material:** TPU

| Figure                                                                              | Connection type head A                             | Connection type head B      | Connecting cable | Locking nut material      | Type          | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|------------------|---------------------------|---------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G02M | 6009382  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G05M | 6009866  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-G10M | 6010543  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W02M | 6009383  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W05M | 6009867  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-W10M | 6010541  |

#### Connecting cables with female connector, M8, 3-pin

- **Cable material:** PVC
- **Connector material:** TPU

| Figure                                                                              | Connection type head A                            | Connection type head B      | Connecting cable | Locking nut material      | Type          | Part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------|------------------|---------------------------|---------------|----------|
|  | Female connector, M8, 3-pin, straight, unshielded | Cable, open conductor heads | 2 m, 3-wire      | CuZn, nickel-plated brass | DOL-0803-G02M | 6010785  |
|                                                                                     |                                                   |                             | 5 m, 3-wire      | CuZn, nickel-plated brass | DOL-0803-G05M | 6022009  |
|                                                                                     |                                                   |                             | 10 m, 3-wire     | CuZn, nickel-plated brass | DOL-0803-G10M | 6022011  |

| Figure                                                                            | Connection type head A                          | Connection type head B      | Connecting cable | Locking nut material      | Type          | Part no. |
|-----------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------|------------------|---------------------------|---------------|----------|
|  | Female connector, M8, 3-pin, angled, unshielded | Cable, open conductor heads | 2 m, 3-wire      | CuZn, nickel-plated brass | DOL-0803-W02M | 6008489  |
|                                                                                   |                                                 |                             | 5 m, 3-wire      | CuZn, nickel-plated brass | DOL-0803-W05M | 6022010  |
|                                                                                   |                                                 |                             | 10 m, 3-wire     | CuZn, nickel-plated brass | DOL-0803-W10M | 6022012  |

Female connectors (ready to assemble), M12, 4-pin

| Figure                                                                            | Connection type head A                             | Connection type head B | Connector material | Locking nut material | Type       | Part no. |
|-----------------------------------------------------------------------------------|----------------------------------------------------|------------------------|--------------------|----------------------|------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Screw-type terminals   | PA                 | CuZn                 | DOS-1204-G | 6007302  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Screw-type terminals   | PBT                | CuZn                 | DOS-1204-W | 6007303  |

Female connectors (ready to assemble), M8, 3-pin

| Figure                                                                             | Connection type head A                            | Connection type head B | Connector material | Locking nut material | Type       | Part no. |
|------------------------------------------------------------------------------------|---------------------------------------------------|------------------------|--------------------|----------------------|------------|----------|
|   | Female connector, M8, 3-pin, straight, unshielded | Screw-type terminals   | PBT/PA             | CuZn                 | DOS-0803-G | 7902077  |
|  | Female connector, M8, 3-pin, angled, unshielded   | Solder connection      | PA/Zinc diecast    | CuZn                 | DOS-0803-W | 7902078  |

Dimensional drawings → [page 31](#)

## THE ECONOMICAL STANDARD FOR USE IN INDUSTRIAL ENVIRONMENTS



### Additional information

|                               |    |
|-------------------------------|----|
| Detailed technical data ..... | 13 |
| Ordering information .....    | 14 |
| Dimensional drawings .....    | 15 |
| Connection diagram .....      | 16 |
| Installation note .....       | 16 |
| Recommended accessories ..... | 17 |

### Product description

SICK's inductive sensors offer precise detection, less downtime, and a long service life. The IME inductive sensors pack high technology into the smallest of spaces. The integrated ASIC chip enables digital adjustment after the end of the manufacturing process. The saving of values in the ASIC ensures highly precise switching points and very high

repeatability of values – for any number of production runs. IME sensors are completely encapsulated with hot melt technology, which increases these sensors' life under shock and vibration. The customer benefits from high positioning accuracy in the machine and long-term sensor reliability.

### At a glance

- Type: M12
- Extended sensing range: 6 mm to 10 mm
- Electrical wiring: DC 3-wire
- Enclosure rating: IP 67
- Temperature range: -25 °C to 75 °C
- Nickel-plated brass housing, plastic sensing face

### Your benefits

- Reliable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life
- High level of cost-effectiveness thanks to low acquisition costs
- Comprehensive standard product portfolio
- Easy to implement customer-specific variants within the standard product portfolio

→ [www.mysick.com/en/IME12](http://www.mysick.com/en/IME12)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

### Features

|                                               | Quasi-flush                   | Non-flush |
|-----------------------------------------------|-------------------------------|-----------|
| <b>Housing</b>                                | Cylindrical                   |           |
| <b>Thread size</b>                            | M12 x 1                       |           |
| <b>Sensing range <math>S_n</math></b>         | 6 mm                          | 10 mm     |
| <b>Assured sensing range <math>S_a</math></b> | 4.86 mm                       | 8.1 mm    |
| <b>Installation type</b>                      | Quasi-flush                   | Non-flush |
| <b>Switching frequency</b>                    | 800 Hz                        | 400 Hz    |
| <b>Output type</b>                            | PNP / NPN (depending on type) |           |
| <b>Output function</b>                        | NO / NC (depending on type)   |           |
| <b>Electrical wiring</b>                      | DC 3-wire                     |           |
| <b>Enclosure rating <sup>1)</sup></b>         | IP 67                         |           |

<sup>1)</sup> According to EN 60529.

### Mechanics/electronics

|                                                |                                                               |
|------------------------------------------------|---------------------------------------------------------------|
| <b>Supply voltage</b>                          | 10 V DC ... 30 V DC                                           |
| <b>Ripple</b>                                  | ≤ 10 %                                                        |
| <b>Voltage drop <sup>1)</sup></b>              | ≤ 2 V                                                         |
| <b>Current consumption</b>                     | ≤ 10 mA                                                       |
| <b>Time delay before availability</b>          | ≤ 50 ms                                                       |
| <b>Hysteresis</b>                              | 1 % ... 15 %                                                  |
| <b>Repeatability <sup>3) 4)</sup></b>          | ≤ 5 %                                                         |
| <b>Temperature drift (of <math>S_r</math>)</b> | ± 10 %                                                        |
| <b>EMC</b>                                     | According to EN 60947-5-2                                     |
| <b>Continuous current <math>I_a</math></b>     | ≤ 200 mA                                                      |
| <b>Current consumption, no load</b>            | ≤ 10 mA                                                       |
| <b>Connection type</b>                         | Cable, 2 m, PVC<br>Male connector, M12<br>(depending on type) |
| <b>Short-circuit protection</b>                | ✓                                                             |
| <b>Reverse polarity protection</b>             | ✓                                                             |
| <b>Power-up pulse protection</b>               | ✓                                                             |
| <b>Shock and vibration resistance</b>          | 30 g, 11 ms/10 Hz ... 55 Hz, 1 mm                             |
| <b>Ambient operating temperature</b>           | -25 °C ... +75 °C                                             |
| <b>Ambient storage temperature</b>             | -25 °C ... +75 °C                                             |
| <b>Housing material</b>                        | Metal, Nickel-plated brass                                    |
| <b>Housing cap material</b>                    | Plastic, PA6                                                  |
| <b>Tightening torque, max.</b>                 | 12 Nm                                                         |

<sup>1)</sup> At  $I_a$  max.

<sup>2)</sup> Without load.

<sup>3)</sup>  $U_b$  and  $T_a$  constant.

<sup>4)</sup> Of  $S_r$ .

## Reduction factors

|                                   | Quasi-flush                                    | Non-flush    |
|-----------------------------------|------------------------------------------------|--------------|
| <b>Note</b>                       | The values are reference values which may vary |              |
| <b>St37 steel (Fe)</b>            | Approx. 1                                      | Approx. 1    |
| <b>Stainless steel (V2A, 304)</b> | Approx. 0.75                                   | Approx. 0.68 |
| <b>Aluminum (Al)</b>              | Approx. 0.52                                   | Approx. 0.47 |
| <b>Copper (Cu)</b>                | Approx. 0.45                                   | Approx. 0.42 |
| <b>Brass (Br)</b>                 | Approx. 0.54                                   | Approx. 0.50 |

## Ordering information

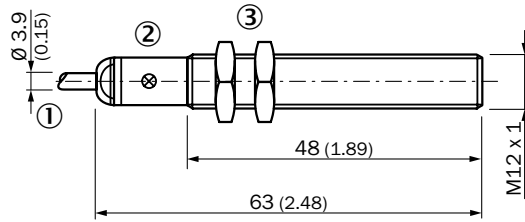
### IME12

- **Electrical wiring:** DC 3-wire

| Housing | Sensing range $S_n$ | Installation type | Output function | Output type | Connection              | Housing    | Connection diagram | Model name      | Part no. |
|---------|---------------------|-------------------|-----------------|-------------|-------------------------|------------|--------------------|-----------------|----------|
| M12 x 1 | 6 mm                | Quasi-flush       | NO              | NPN         | Connector M12, 4-pin    | Short-body | Cd-007             | IME12-06BNSZC0K | 1071220  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME12-06BNSZC0S | 1071228  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME12-06BNSZW2K | 1071216  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME12-06BNSZW2S | 1071224  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-007             | IME12-06BPSZC0K | 1071218  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME12-06BPSZC0S | 1071226  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME12-06BPSZW2K | 1071214  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME12-06BPSZW2S | 1071222  |
|         |                     |                   | NC              | NPN         | Connector M12, 4-pin    | Short-body | Cd-008             | IME12-06BNOZC0K | 1071221  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME12-06BNOZC0S | 1071229  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME12-06BNOZW2K | 1071217  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME12-06BNOZW2S | 1071225  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-008             | IME12-06BPOZC0K | 1071219  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME12-06BPOZC0S | 1071227  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME12-06BPOZW2K | 1071215  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME12-06BPOZW2S | 1071223  |
|         | 10 mm               | Non-flush         | NO              | NPN         | Connector M12, 4-pin    | Short-body | Cd-007             | IME12-10NNSZC0K | 1071232  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME12-10NNSZC0S | 1071244  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME12-10NNSZW2K | 1071236  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME12-10NNSZW2S | 1071240  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-007             | IME12-10NPSZC0K | 1071234  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME12-10NPSZC0S | 1071242  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME12-10NPSZW2K | 1071230  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME12-10NPSZW2S | 1071238  |
|         |                     |                   | NC              | NPN         | Connector M12, 4-pin    | Short-body | Cd-008             | IME12-10NNOZC0K | 1071237  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME12-10NNOZC0S | 1071245  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME12-10NNOZW2K | 1071233  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME12-10NNOZW2S | 1071241  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-008             | IME12-10NPOZC0K | 1071235  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME12-10NPOZC0S | 1071243  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME12-10NPOZW2K | 1071231  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME12-10NPOZW2S | 1071239  |

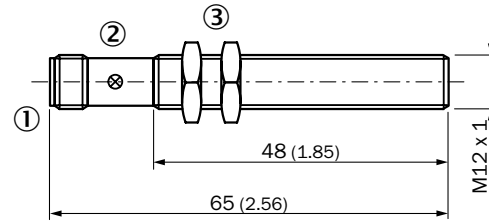
### Dimensional drawings (Dimensions in mm (inch))

IME12 Standard, cable, flush



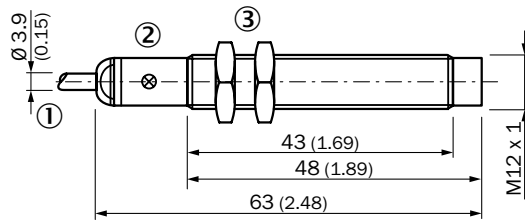
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

IME12 Standard, connector, flush



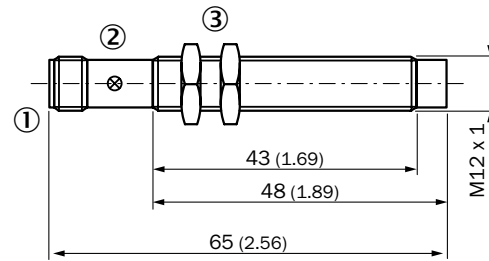
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

IME12 Standard, cable, non-flush



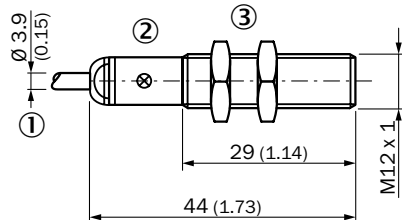
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

IME12 Standard, connector, non-flush



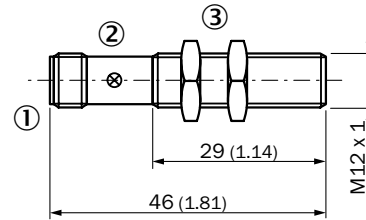
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

IME12 Short-body housing, cable, flush



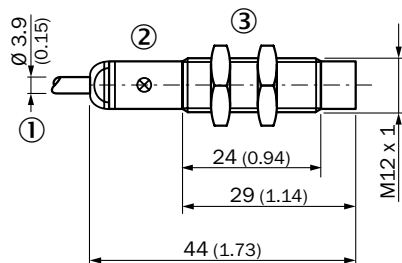
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

IME12 Short-body housing, connector, flush



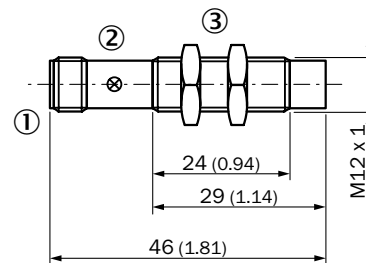
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

IME12 Short-body housing, cable, non-flush



- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

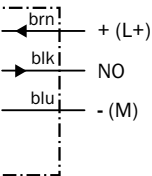
IME12 Short-body housing, connector, non-flush



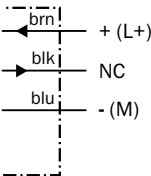
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); width across 17, metal

Connection diagram

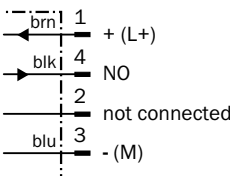
Cd-001



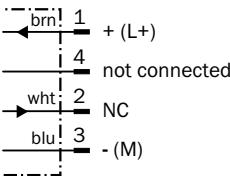
Cd-003



Cd-007

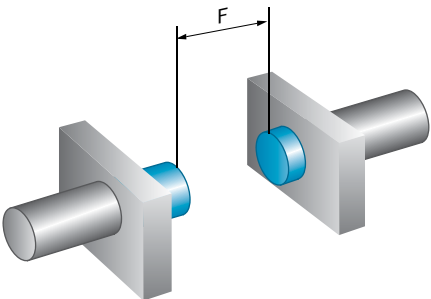
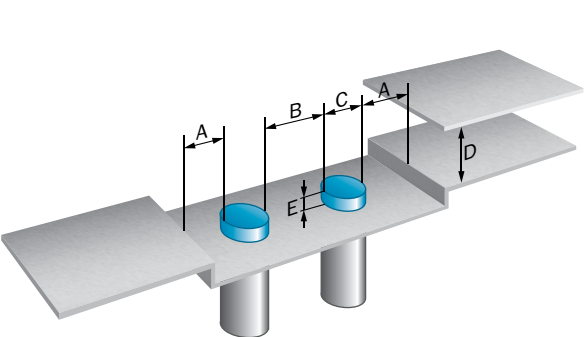


Cd-008

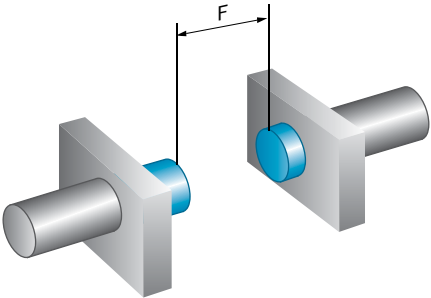
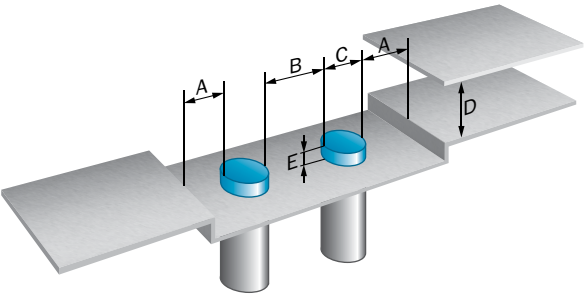


Installation note

Quasi-flush installation



Non-flush installation



Installation note

|                 | Installation type | Sensing range Sn | A     | B     | C     | D     | E     | F      |
|-----------------|-------------------|------------------|-------|-------|-------|-------|-------|--------|
| IME12-06Bxxxxxx | Quasi-flush       | 6 mm             | 6 mm  | 25 mm | 12 mm | 18 mm | 2 mm  | 60 mm  |
| IME12-10Nxxxxxx | Non-flush         | 10 mm            | 15 mm | 45 mm | 12 mm | 30 mm | 13 mm | 100 mm |

## Recommended accessories

### Mounting systems

#### Mounting brackets

| Figure                                                                            | Material           | Description                    | Type       | Part no. |
|-----------------------------------------------------------------------------------|--------------------|--------------------------------|------------|----------|
|  | Steel, zinc coated | Mounting plate for M12 sensors | BEF-WG-M12 | 5321869  |
|  |                    | Mounting bracket, M12 thread   | BEF-WN-M12 | 5308447  |

#### Terminal brackets

| Figure                                                                            | Material                               | Description                                              | Type        | Part no. |
|-----------------------------------------------------------------------------------|----------------------------------------|----------------------------------------------------------|-------------|----------|
|  | Plastic (PA12), glass-fiber reinforced | Clamping block for round sensors M12, without fixed stop | BEF-KH-M12  | 2051479  |
|                                                                                   |                                        | Clamping block for round sensors M12, with fixed stop    | BEF-KHF-M12 | 2051480  |

### Connection systems

#### Connecting cables with female connector, M12, 4-pin

- **Cable material:** PVC
- **Connector material:** TPU

| Figure                                                                              | Connection type head A                             | Connection type head B      | Connecting cable | Locking nut material      | Type          | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|------------------|---------------------------|---------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G02M | 6009382  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G05M | 6009866  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-G10M | 6010543  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W02M | 6009383  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W05M | 6009867  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-W10M | 6010541  |

#### Female connectors (ready to assemble), M12, 4-pin

| Figure                                                                              | Connection type head A                             | Connection type head B | Connector material | Locking nut material | Type       | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------|------------------------|--------------------|----------------------|------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Screw-type terminals   | PA                 | CuZn                 | DOS-1204-G | 6007302  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Screw-type terminals   | PBT                | CuZn                 | DOS-1204-W | 6007303  |

Dimensional drawings → [page 31](#)

## THE ECONOMICAL STANDARD FOR USE IN INDUSTRIAL ENVIRONMENTS



### Additional information

|                               |    |
|-------------------------------|----|
| Detailed technical data ..... | 19 |
| Ordering information .....    | 20 |
| Dimensional drawings .....    | 21 |
| Connection diagram .....      | 22 |
| Installation note .....       | 22 |
| Recommended accessories ..... | 23 |

### Product description

SICK's inductive sensors offer precise detection, less downtime, and a long service life. The IME inductive sensors pack high technology into the smallest of spaces. The integrated ASIC chip enables digital adjustment after the end of the manufacturing process. The saving of values in the ASIC ensures highly precise switching points and very high

repeatability of values – for any number of production runs. IME sensors are completely encapsulated with hot melt technology, which increases these sensors' life under shock and vibration. The customer benefits from high positioning accuracy in the machine and long-term sensor reliability.

### At a glance

- Type: M18
- Extended sensing range: 12 mm to 20 mm
- Electrical wiring: DC 3-wire
- Enclosure rating: IP 67
- Temperature range: -25 °C to 75 °C
- Nickel-plated brass housing, plastic sensing face

### Your benefits

- Reliable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life
- High level of cost-effectiveness thanks to low acquisition costs
- Comprehensive standard product portfolio
- Easy to implement customer-specific variants within the standard product portfolio

→ [www.mysick.com/en/IME18](http://www.mysick.com/en/IME18)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

### Features

|                                               | Quasi-flush                   | Non-flush |
|-----------------------------------------------|-------------------------------|-----------|
| <b>Housing</b>                                | Cylindrical                   |           |
| <b>Thread size</b>                            | M18 x 1                       |           |
| <b>Sensing range <math>S_n</math></b>         | 12 mm                         | 20 mm     |
| <b>Assured sensing range <math>S_a</math></b> | 9.72 mm                       | 16.2 mm   |
| <b>Installation type</b>                      | Quasi-flush                   | Non-flush |
| <b>Switching frequency</b>                    | 500 Hz                        | 200 Hz    |
| <b>Output type</b>                            | PNP / NPN (depending on type) |           |
| <b>Output function</b>                        | NO / NC (depending on type)   |           |
| <b>Electrical wiring</b>                      | DC 3-wire                     |           |
| <b>Enclosure rating <sup>1)</sup></b>         | IP 67                         |           |

<sup>1)</sup> According to EN 60529.

### Mechanics/electronics

|                                                  | Quasi-flush                                                   | Non-flush |
|--------------------------------------------------|---------------------------------------------------------------|-----------|
| <b>Supply voltage</b>                            | 10 V DC ... 30 V DC                                           |           |
| <b>Ripple</b>                                    | ≤ 10 %                                                        |           |
| <b>Voltage drop <sup>1)</sup></b>                | ≤ 2 V                                                         |           |
| <b>Current consumption</b>                       | ≤ 10 mA                                                       |           |
| <b>Time delay before availability</b>            | ≤ 50 ms                                                       | ≤ 100 ms  |
| <b>Hysteresis</b>                                | 1 % ... 15 %                                                  |           |
| <b>Repeatability <sup>3)</sup> <sup>4)</sup></b> | ≤ 5 %                                                         |           |
| <b>Temperature drift (of <math>S_r</math>)</b>   | ± 10 %                                                        |           |
| <b>EMC</b>                                       | According to EN 60947-5-2                                     |           |
| <b>Continuous current <math>I_a</math></b>       | ≤ 200 mA                                                      |           |
| <b>Current consumption, no load</b>              | ≤ 10 mA                                                       |           |
| <b>Connection type</b>                           | Cable, 2 m, PVC<br>Male connector, M12<br>(depending on type) |           |
| <b>Short-circuit protection</b>                  | ✓                                                             |           |
| <b>Reverse polarity protection</b>               | ✓                                                             |           |
| <b>Power-up pulse protection</b>                 | ✓                                                             |           |
| <b>Shock and vibration resistance</b>            | 30 g, 11 ms/10 Hz ... 55 Hz, 1 mm                             |           |
| <b>Ambient operating temperature</b>             | -25 °C ... +75 °C                                             |           |
| <b>Ambient storage temperature</b>               | -25 °C ... +75 °C                                             |           |
| <b>Housing material</b>                          | Metal, Nickel-plated brass                                    |           |
| <b>Housing cap material</b>                      | Plastic, PA6                                                  |           |
| <b>Tightening torque, max.</b>                   | 40 Nm                                                         |           |

<sup>1)</sup> At  $I_a$  max.

<sup>2)</sup> Without load.

<sup>3)</sup>  $U_b$  and  $T_a$  constant.

<sup>4)</sup> Of  $S_r$ .

## Reduction factors

|                                   | Quasi-flush                                    | Non-flush    |
|-----------------------------------|------------------------------------------------|--------------|
| <b>Note</b>                       | The values are reference values which may vary |              |
| <b>St37 steel (Fe)</b>            | Approx. 1                                      | Approx. 1    |
| <b>Stainless steel (V2A, 304)</b> | Approx. 0.78                                   | Approx. 0.78 |
| <b>Aluminum (Al)</b>              | Approx. 0.43                                   | Approx. 0.43 |
| <b>Copper (Cu)</b>                | Approx. 0.35                                   | Approx. 0.37 |
| <b>Brass (Br)</b>                 | Approx. 0.47                                   | Approx. 0.40 |

## Ordering information

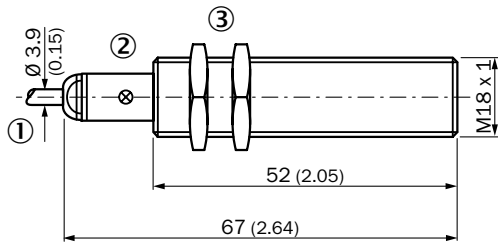
### IME18

- **Electrical wiring:** DC 3-wire

| Housing | Sensing range $S_n$ | Installation type | Output function | Output type | Connection              | Housing    | Connection diagram | Model name      | Part no. |
|---------|---------------------|-------------------|-----------------|-------------|-------------------------|------------|--------------------|-----------------|----------|
| M18 x 1 | 12 mm               | Quasi-flush       | NO              | NPN         | Connector M12, 4-pin    | Short-body | Cd-007             | IME18-12BNSZC0K | 1071254  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME18-12BNSZC0S | 1071262  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME18-12BNSZW2K | 1071248  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME18-12BNSZW2S | 1071258  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-007             | IME18-12BPSZC0K | 1071252  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME18-12BPSZC0S | 1071260  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME18-12BPSZW2K | 1071246  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME18-12BPSZW2S | 1071256  |
|         |                     |                   | NC              | NPN         | Connector M12, 4-pin    | Short-body | Cd-008             | IME18-12BNOZC0K | 1071255  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME18-12BNOZC0S | 1071263  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME18-12BNOZW2K | 1071249  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME18-12BNOZW2S | 1071259  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-008             | IME18-12BPOZC0K | 1071253  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME18-12BPOZC0S | 1071261  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME18-12BPOZW2K | 1071247  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME18-12BPOZW2S | 1071257  |
|         | 20 mm               | Non-flush         | NO              | NPN         | Connector M12, 4-pin    | Short-body | Cd-007             | IME18-20NNSZC0K | 1071271  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME18-20NNSZC0S | 1071279  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME18-20NNSZW2K | 1071267  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME18-20NNSZW2S | 1071275  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-007             | IME18-20NPSZC0K | 1071269  |
|         |                     |                   |                 |             |                         | Standard   | Cd-007             | IME18-20NPSZC0S | 1071277  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001             | IME18-20NPSZW2K | 1071264  |
|         |                     |                   |                 |             |                         | Standard   | Cd-001             | IME18-20NPSZW2S | 1071273  |
|         |                     |                   | NC              | NPN         | Connector M12, 4-pin    | Short-body | Cd-008             | IME18-20NNOZC0K | 1071272  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME18-20NNOZC0S | 1071280  |
|         |                     |                   |                 | NPN         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME18-20NNOZW2K | 1071268  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME18-20NNOZW2S | 1071276  |
|         |                     |                   | NC              | PNP         | Connector M12, 4-pin    | Short-body | Cd-008             | IME18-20NPOZC0K | 1071270  |
|         |                     |                   |                 |             |                         | Standard   | Cd-008             | IME18-20NPOZC0S | 1071278  |
|         |                     |                   |                 | PNP         | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003             | IME18-20NPOZW2K | 1071265  |
|         |                     |                   |                 |             |                         | Standard   | Cd-003             | IME18-20NPOZW2S | 1071274  |

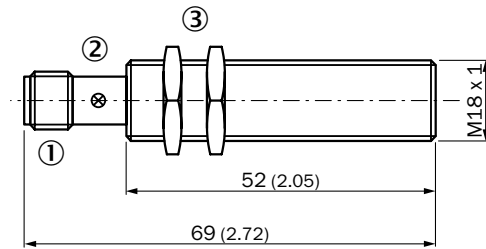
## Dimensional drawings (Dimensions in mm (inch))

IME18 Standard, cable, flush



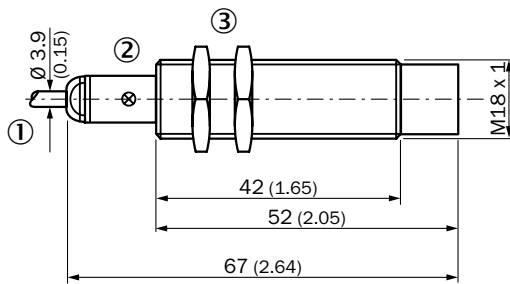
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

IME18 Standard, connector, flush



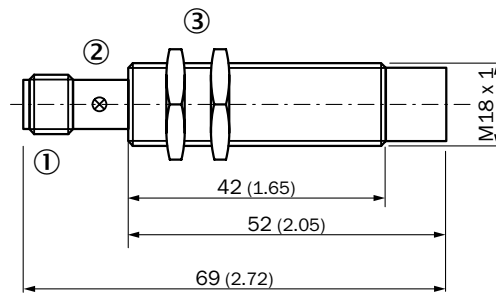
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

IME18 Standard, cable, non-flush



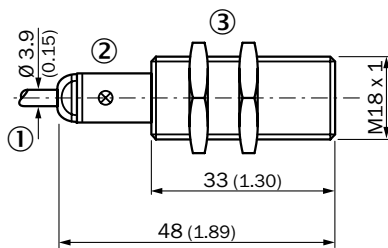
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

IME18 Standard, connector, non-flush



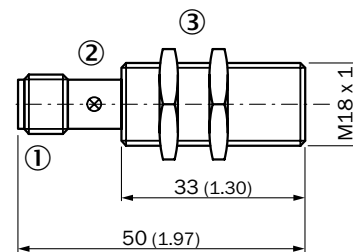
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

IME18 Short-body housing, cable, flush



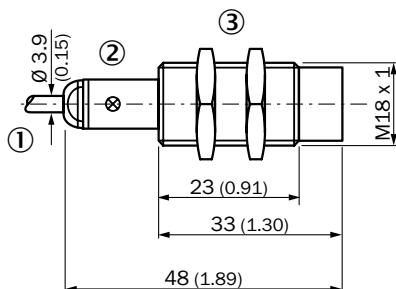
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

IME18 Short-body housing, connector, flush



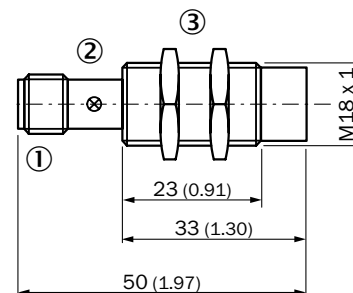
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

IME18 Short-body housing, cable, non-flush



- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

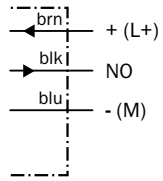
IME18 Short-body housing, connector, non-flush



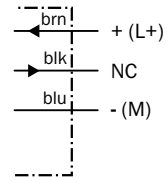
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 24 mm hex, metal

## Connection diagram

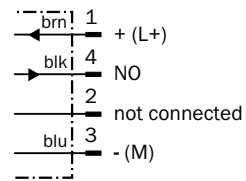
Cd-001



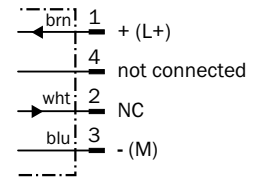
Cd-003



Cd-007

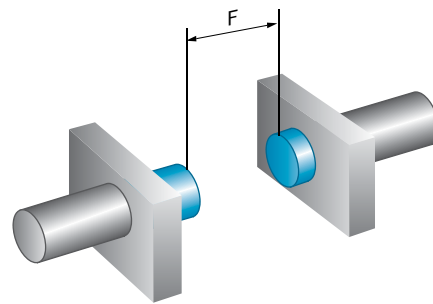
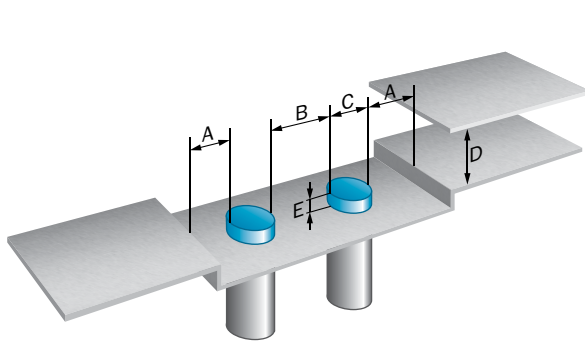


Cd-008

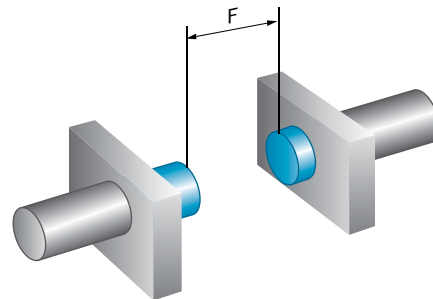
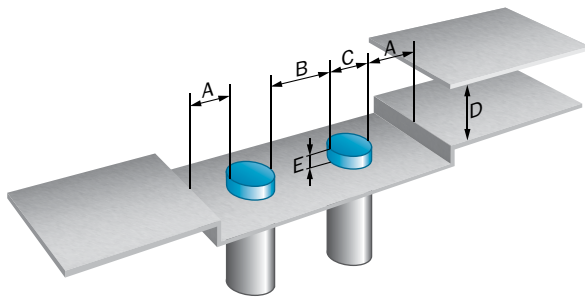


## Installation note

### Quasi-flush installation



### Non-flush installation



## Installation note

|                 | Installation type | Sensing range Sn | A     | B     | C     | D     | E     | F      |
|-----------------|-------------------|------------------|-------|-------|-------|-------|-------|--------|
| IME18-12Bxxxxxx | Quasi-flush       | 12 mm            | 14 mm | 35 mm | 18 mm | 36 mm | 4 mm  | 120 mm |
| IME18-20Nxxxxxx | Non-flush         | 20 mm            | 30 mm | 86 mm | 18 mm | 60 mm | 20 mm | 200 mm |

## Recommended accessories

### Mounting systems

#### Mounting brackets

| Figure                                                                            | Material           | Description                    | Type       | Part no. |
|-----------------------------------------------------------------------------------|--------------------|--------------------------------|------------|----------|
|  | Steel, zinc coated | Mounting plate for M18 sensors | BEF-WG-M18 | 5321870  |
|  |                    | Mounting bracket, M18 thread   | BEF-WN-M18 | 5308446  |

#### Terminal brackets

| Figure                                                                            | Material                               | Description                                              | Type        | Part no. |
|-----------------------------------------------------------------------------------|----------------------------------------|----------------------------------------------------------|-------------|----------|
|  | Plastic (PA12), glass-fiber reinforced | Clamping block for round sensors M18, without fixed stop | BEF-KH-M18  | 2051481  |
|                                                                                   |                                        | Clamping block for round sensors M18, with fixed stop    | BEF-KHF-M18 | 2051482  |

### Connection systems

#### Connecting cables with female connector, M12, 4-pin

- **Cable material:** PVC
- **Connector material:** TPU

| Figure                                                                              | Connection type head A                             | Connection type head B      | Connecting cable | Locking nut material      | Type          | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|------------------|---------------------------|---------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G02M | 6009382  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G05M | 6009866  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-G10M | 6010543  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W02M | 6009383  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W05M | 6009867  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-W10M | 6010541  |

#### Female connectors (ready to assemble), M12, 4-pin

| Figure                                                                              | Connection type head A                             | Connection type head B | Connector material | Locking nut material | Type       | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------|------------------------|--------------------|----------------------|------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Screw-type terminals   | PA                 | CuZn                 | DOS-1204-G | 6007302  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Screw-type terminals   | PBT                | CuZn                 | DOS-1204-W | 6007303  |

Dimensional drawings → [page 31](#)

## THE ECONOMICAL STANDARD FOR USE IN INDUSTRIAL ENVIRONMENTS



### Product description

SICK's inductive sensors offer precise detection, less downtime, and a long service life. The IME inductive sensors pack high technology into the smallest of spaces. The integrated ASIC chip enables digital adjustment after the end of the manufacturing process. The saving of values in the ASIC ensures highly precise switching points and very high

repeatability of values – for any number of production runs. IME sensors are completely encapsulated with hot melt technology, which increases these sensors' life under shock and vibration. The customer benefits from high positioning accuracy in the machine and long-term sensor reliability.

### At a glance

- Type: M30
- Extended sensing range: 20 mm to 38 mm
- Electrical wiring: DC 3-wire
- Enclosure rating: IP 67
- Temperature range: -25 °C to 75 °C
- Nickel-plated brass housing, plastic sensing face

### Your benefits

- Reliable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life
- High level of cost-effectiveness thanks to low acquisition costs
- Comprehensive standard product portfolio
- Easy to implement customer-specific variants within the standard product portfolio



### Additional information

|                               |    |
|-------------------------------|----|
| Detailed technical data ..... | 25 |
| Ordering information .....    | 26 |
| Dimensional drawings .....    | 27 |
| Connection diagram .....      | 28 |
| Installation note .....       | 29 |
| Recommended accessories ..... | 30 |

→ [www.mysick.com/en/IME30](http://www.mysick.com/en/IME30)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

### Features

|                                               | Quasi-flush                   | Non-flush |
|-----------------------------------------------|-------------------------------|-----------|
| <b>Housing</b>                                | Cylindrical                   |           |
| <b>Thread size</b>                            | M30 x 1.5                     |           |
| <b>Sensing range <math>S_n</math></b>         | 20 mm                         | 38 mm     |
| <b>Assured sensing range <math>S_a</math></b> | 16.2 mm                       | 30.78 mm  |
| <b>Installation type</b>                      | Quasi-flush                   | Non-flush |
| <b>Switching frequency</b>                    | 200 Hz                        | 100 Hz    |
| <b>Output type</b>                            | PNP / NPN (depending on type) |           |
| <b>Output function</b>                        | NO / NC (depending on type)   |           |
| <b>Electrical wiring</b>                      | DC 3-wire                     |           |
| <b>Enclosure rating <sup>1)</sup></b>         | IP 67                         |           |

<sup>1)</sup> According to EN 60529.

### Mechanics/electronics

|                                                | Quasi-flush                                                   | Non-flush |
|------------------------------------------------|---------------------------------------------------------------|-----------|
| <b>Supply voltage</b>                          | 10 V DC ... 30 V DC                                           |           |
| <b>Ripple</b>                                  | ≤ 10 %                                                        |           |
| <b>Voltage drop <sup>1)</sup></b>              | ≤ 2 V                                                         |           |
| <b>Current consumption</b>                     | ≤ 10 mA                                                       |           |
| <b>Time delay before availability</b>          | ≤ 200 ms                                                      |           |
| <b>Warm-up time</b>                            | 60 s                                                          | 90 s      |
| <b>Hysteresis</b>                              | 1 % ... 15 %                                                  |           |
| <b>Repeatability <sup>3) 4)</sup></b>          | ≤ 5 %                                                         |           |
| <b>Temperature drift (of <math>S_r</math>)</b> | ± 10 %                                                        |           |
| <b>EMC</b>                                     | According to EN 60947-5-2                                     |           |
| <b>Continuous current <math>I_a</math></b>     | ≤ 200 mA                                                      |           |
| <b>Current consumption, no load</b>            | ≤ 10 mA                                                       |           |
| <b>Connection type</b>                         | Cable, 2 m, PVC<br>Male connector, M12<br>(depending on type) |           |
| <b>Short-circuit protection</b>                | ✓                                                             |           |
| <b>Reverse polarity protection</b>             | ✓                                                             |           |
| <b>Power-up pulse protection</b>               | ✓                                                             |           |
| <b>Shock and vibration resistance</b>          | 30 g, 11 ms/10 Hz ... 55 Hz, 1 mm                             |           |
| <b>Ambient operating temperature</b>           | -25 °C ... +75 °C                                             |           |
| <b>Ambient storage temperature</b>             | -25 °C ... +75 °C                                             |           |
| <b>Housing material</b>                        | Metal, Nickel-plated brass                                    |           |
| <b>Housing cap material</b>                    | Plastic, PA6                                                  |           |
| <b>Tightening torque, max.</b>                 | 100 Nm                                                        |           |

<sup>1)</sup> At  $I_a$  max.

<sup>2)</sup> Without load.

<sup>3)</sup>  $U_b$  and  $T_a$  constant.

<sup>4)</sup> Of  $S_r$ .

## Reduction factors

|                                   | Quasi-flush                                    | Non-flush    |
|-----------------------------------|------------------------------------------------|--------------|
| <b>Note</b>                       | The values are reference values which may vary |              |
| <b>St37 steel (Fe)</b>            | Approx. 1                                      | Approx. 1    |
| <b>Stainless steel (V2A, 304)</b> | Approx. 0.78                                   | Approx. 0.77 |
| <b>Aluminum (Al)</b>              | Approx. 0.35                                   | Approx. 0.44 |
| <b>Copper (Cu)</b>                | Approx. 0.27                                   | Approx. 0.37 |
| <b>Brass (Br)</b>                 | Approx. 0.38                                   | Approx. 0.46 |

## Ordering information

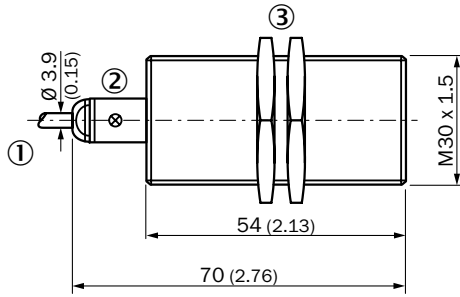
### IME30

- **Electrical wiring:** DC 3-wire

| Housing   | Sensing range $S_n$ | Installation type | Output function | Output type | Connection              | Housing    | Con-<br>nection<br>diagram | Model name      | Part no. |
|-----------|---------------------|-------------------|-----------------|-------------|-------------------------|------------|----------------------------|-----------------|----------|
| M30 x 1.5 | 20 mm               | Quasi-flush       | NO              | NPN         | Connector M12, 4-pin    | Short-body | Cd-007                     | IME30-20BNSZC0K | 1071287  |
|           |                     |                   |                 |             |                         | Standard   | Cd-007                     | IME30-20BNSZC0S | 1071295  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001                     | IME30-20BNSZW2K | 1071283  |
|           |                     |                   |                 |             |                         | Standard   | Cd-001                     | IME30-20BNSZW2S | 1071291  |
|           |                     |                   |                 | PNP         | Connector M12, 4-pin    | Short-body | Cd-007                     | IME30-20BPSZC0K | 1071285  |
|           |                     |                   |                 |             |                         | Standard   | Cd-007                     | IME30-20BPSZC0S | 1071293  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001                     | IME30-20BPSZW2K | 1071281  |
|           |                     |                   |                 |             |                         | Standard   | Cd-001                     | IME30-20BPSZW2S | 1071289  |
|           |                     |                   | NC              | NPN         | Connector M12, 4-pin    | Short-body | Cd-008                     | IME30-20BNOZC0K | 1071288  |
|           |                     |                   |                 |             |                         | Standard   | Cd-008                     | IME30-20BNOZC0S | 1071296  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003                     | IME30-20BNOZW2K | 1071284  |
|           |                     |                   |                 |             |                         | Standard   | Cd-003                     | IME30-20BNOZW2S | 1071292  |
|           |                     |                   |                 | PNP         | Connector M12, 4-pin    | Short-body | Cd-008                     | IME30-20BPOZC0K | 1071286  |
|           |                     |                   |                 |             |                         | Standard   | Cd-008                     | IME30-20BPOZC0S | 1071294  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003                     | IME30-20BPOZW2K | 1071282  |
|           |                     |                   |                 |             |                         | Standard   | Cd-003                     | IME30-20BPOZW2S | 1071290  |
| M30 x 1.5 | 38 mm               | Non-flush         | NO              | NPN         | Connector M12, 4-pin    | Short-body | Cd-007                     | IME30-38NNSZC0K | 1071303  |
|           |                     |                   |                 |             |                         | Standard   | Cd-007                     | IME30-38NNSZC0S | 1071311  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001                     | IME30-38NNSZW2K | 1071298  |
|           |                     |                   |                 |             |                         | Standard   | Cd-001                     | IME30-38NNSZW2S | 1071307  |
|           |                     |                   |                 | PNP         | Connector M12, 4-pin    | Short-body | Cd-007                     | IME30-38NPSZC0K | 1071301  |
|           |                     |                   |                 |             |                         | Standard   | Cd-007                     | IME30-38NPSZC0S | 1071309  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-001                     | IME30-38NPSZW2K | 1071300  |
|           |                     |                   |                 |             |                         | Standard   | Cd-001                     | IME30-38NPSZW2S | 1071305  |
|           |                     |                   | NC              | NPN         | Connector M12, 4-pin    | Short-body | Cd-008                     | IME30-38NNOZC0K | 1071304  |
|           |                     |                   |                 |             |                         | Standard   | Cd-008                     | IME30-38NNOZC0S | 1071312  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003                     | IME30-38NNOZW2K | 1071299  |
|           |                     |                   |                 |             |                         | Standard   | Cd-003                     | IME30-38NNOZW2S | 1071308  |
|           |                     |                   |                 | PNP         | Connector M12, 4-pin    | Short-body | Cd-008                     | IME30-38NPOZC0K | 1071302  |
|           |                     |                   |                 |             |                         | Standard   | Cd-008                     | IME30-38NPOZC0S | 1071310  |
|           |                     |                   |                 |             | Cable, 3-wire, 2 m, PVC | Short-body | Cd-003                     | IME30-38NPOZW2K | 1071297  |
|           |                     |                   |                 |             |                         | Standard   | Cd-003                     | IME30-38NPOZW2S | 1071306  |

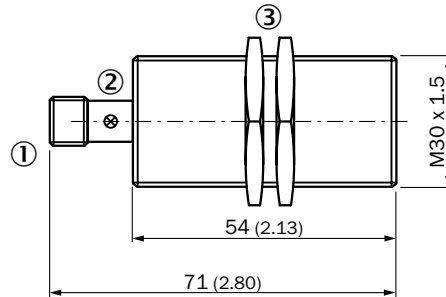
## Dimensional drawings (Dimensions in mm (inch))

IME30 Standard, cable, flush



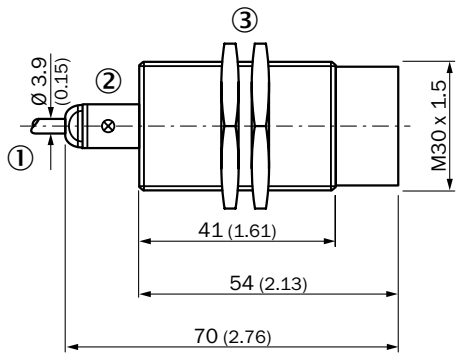
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

IME30 Standard, connector, flush



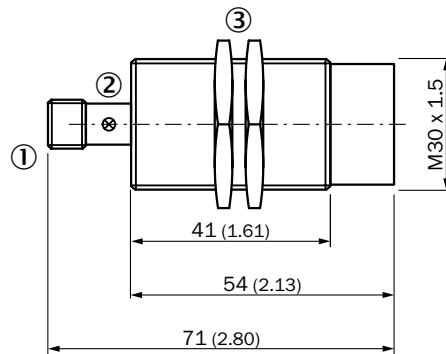
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

IME30 Standard, cable, non-flush



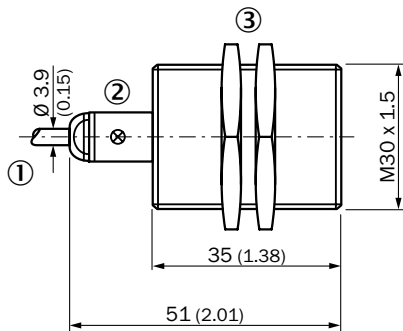
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

IME30 Standard, connector, non-flush



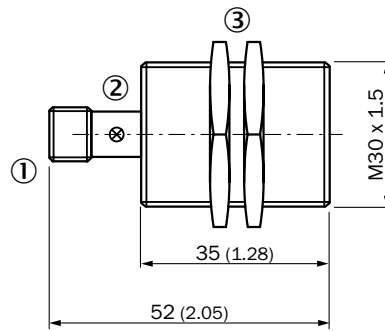
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

IME30 Short-body housing, cable, flush



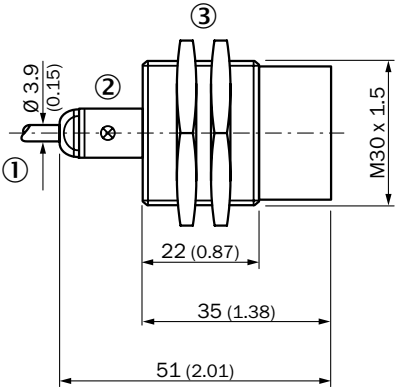
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

IME30 Short-body housing, connector, flush



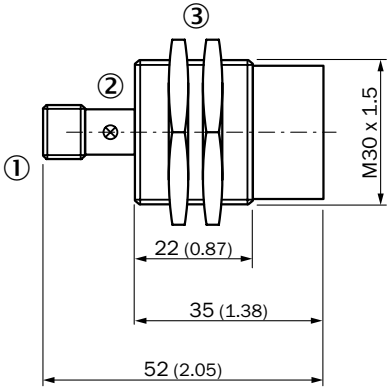
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

IME30 Short-body housing, cable, non-flush



- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

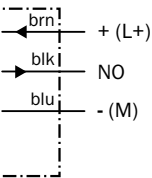
IME30 Short-body housing, connector, non-flush



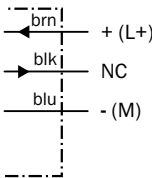
- ① Connection
- ② Status LED
- ③ Fastening nuts (2 x); 36 mm hex, metal

Connection diagram

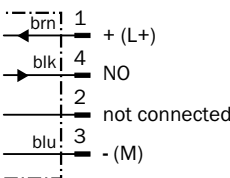
Cd-001



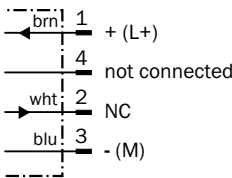
Cd-003



Cd-007

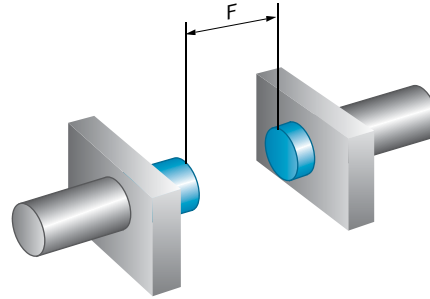
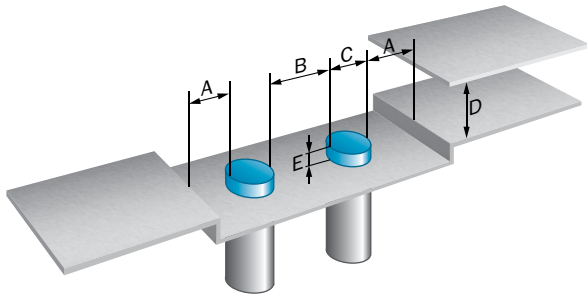


Cd-008

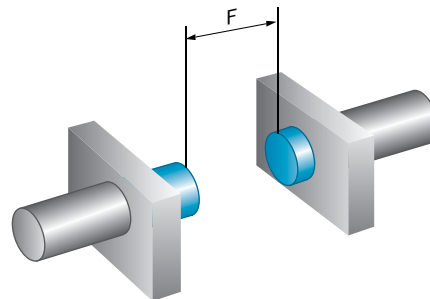
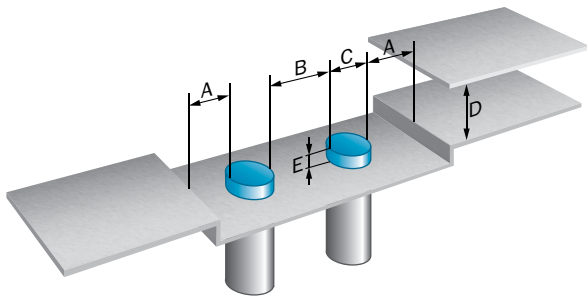


## Installation note

### Quasi-flush installation



### Non-flush installation



## Installation note

|                 | Installation type | Sensing range Sn | A     | B      | C     | D      | E     | F      |
|-----------------|-------------------|------------------|-------|--------|-------|--------|-------|--------|
| IME30-20Bxxxxxx | Quasi-flush       | 20 mm            | 33 mm | 80 mm  | 30 mm | 60 mm  | 6 mm  | 200 mm |
| IME30-38Nxxxxxx | Non-flush         | 38 mm            | 80 mm | 180 mm | 30 mm | 114 mm | 35 mm | 380 mm |

## Recommended accessories

### Mounting systems

#### Universal bar clamp systems

| Figure                                                                            | Material                                        | Description                                | Type        | Part no. |
|-----------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------|-------------|----------|
|  | Zinc plated steel (sheet), Diecast zinc (clamp) | Plate N10 for universal clamp bracket, M30 | BEF-KHS-N10 | 2062372  |

#### Mounting brackets and mounting plates

##### Mounting brackets

| Figure                                                                            | Material           | Description                    | Type       | Part no. |
|-----------------------------------------------------------------------------------|--------------------|--------------------------------|------------|----------|
|  | Steel, zinc coated | Mounting plate for M30 sensors | BEF-WG-M30 | 5321871  |
|  |                    | Mounting bracket, M30 thread   | BEF-WN-M30 | 5308445  |

### Connection systems

#### Connecting cables with female connector, M12, 4-pin

- **Cable material:** PVC
- **Connector material:** TPU

| Figure                                                                              | Connection type head A                             | Connection type head B      | Connecting cable | Locking nut material      | Type          | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|------------------|---------------------------|---------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G02M | 6009382  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-G05M | 6009866  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-G10M | 6010543  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Cable, open conductor heads | 2 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W02M | 6009383  |
|                                                                                     |                                                    |                             | 5 m, 4-wire      | CuZn, nickel-plated brass | DOL-1204-W05M | 6009867  |
|                                                                                     |                                                    |                             | 10 m, 4-wire     | CuZn, nickel-plated brass | DOL-1204-W10M | 6010541  |

#### Female connectors (ready to assemble), M12, 4-pin

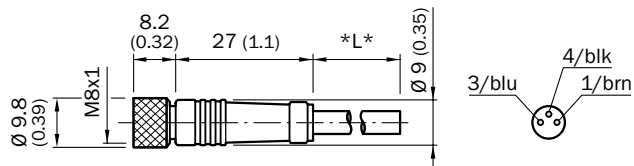
| Figure                                                                              | Connection type head A                             | Connection type head B | Connector material | Locking nut material | Type       | Part no. |
|-------------------------------------------------------------------------------------|----------------------------------------------------|------------------------|--------------------|----------------------|------------|----------|
|  | Female connector, M12, 4-pin, straight, unshielded | Screw-type terminals   | PA                 | CuZn                 | DOS-1204-G | 6007302  |
|  | Female connector, M12, 4-pin, angled, unshielded   | Screw-type terminals   | PBT                | CuZn                 | DOS-1204-W | 6007303  |

Dimensional drawings → [page 31](#)

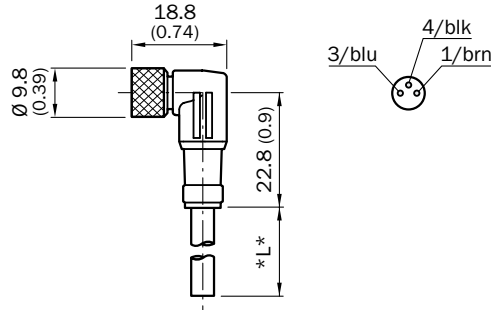
## Dimensional drawings accessories

### Dimensional drawings Connection systems

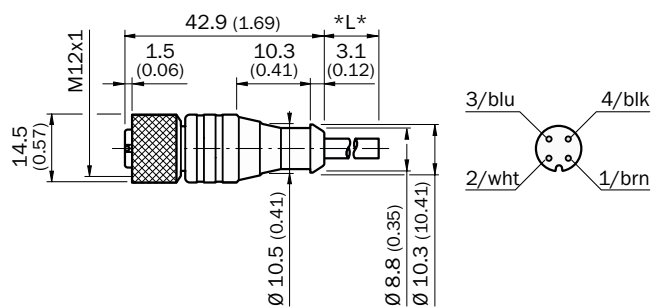
DOL-0803-GxxM



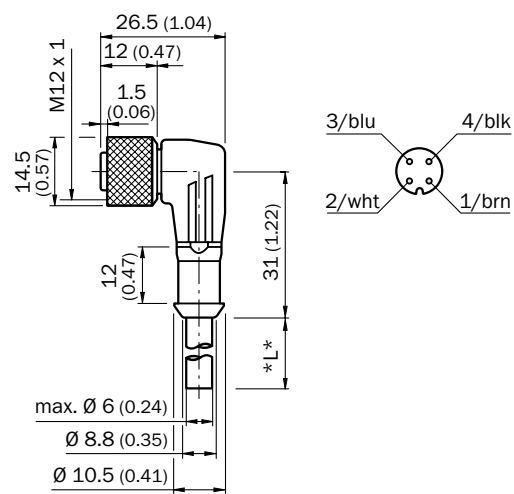
DOL-0803-WxxM



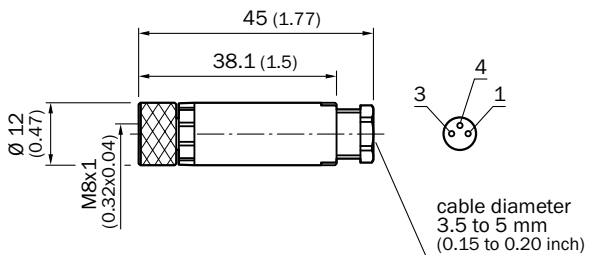
DOL-1204-G02M



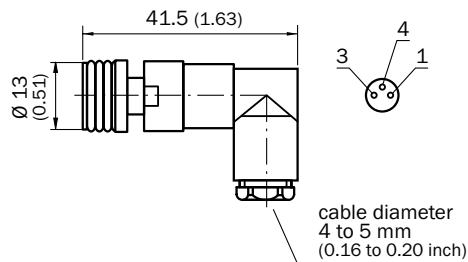
DOL-1204-W02M



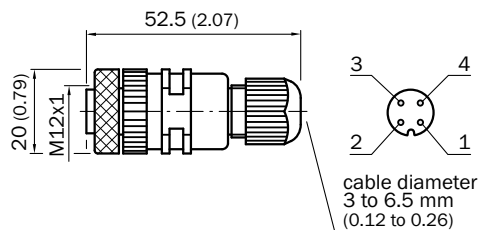
DOS-0803-G



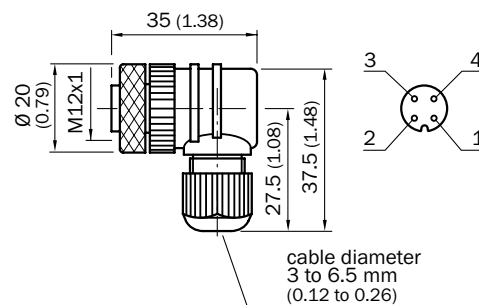
DOS-0803-W



DOS-1204-G

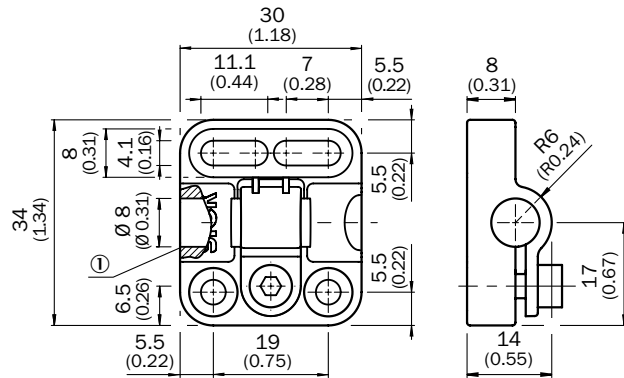


DOS-1204-W

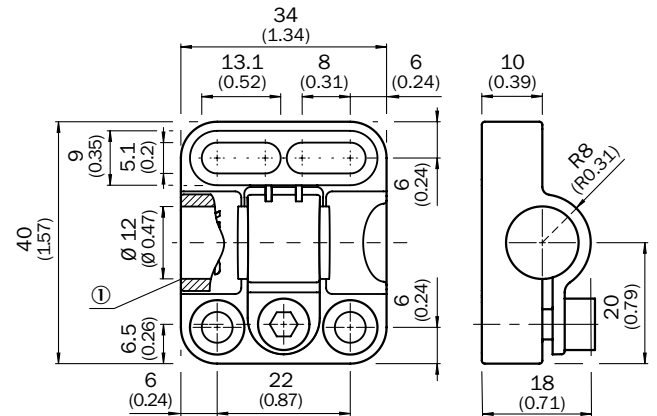


## Dimensional drawings Mounting systems

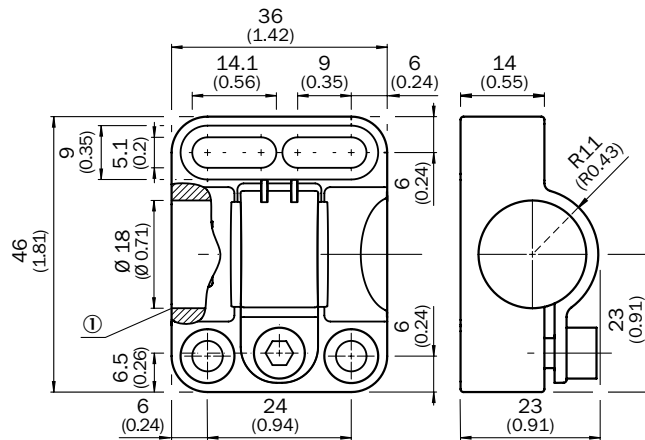
BEF-KH-M08



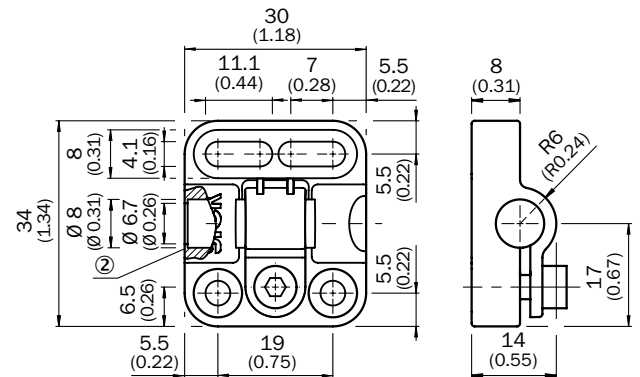
BEF-KH-M12



BEF-KH-M18

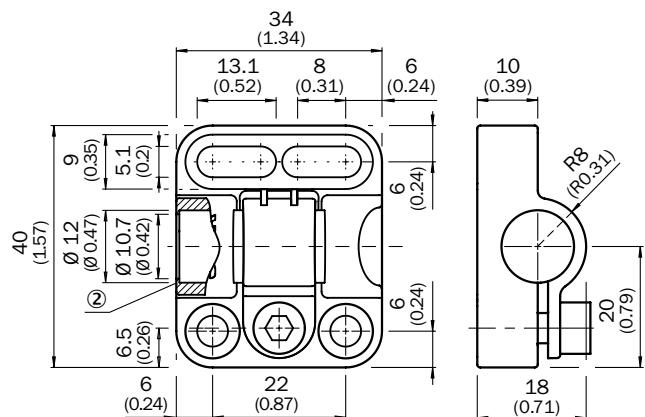


BEF-KHF-M08

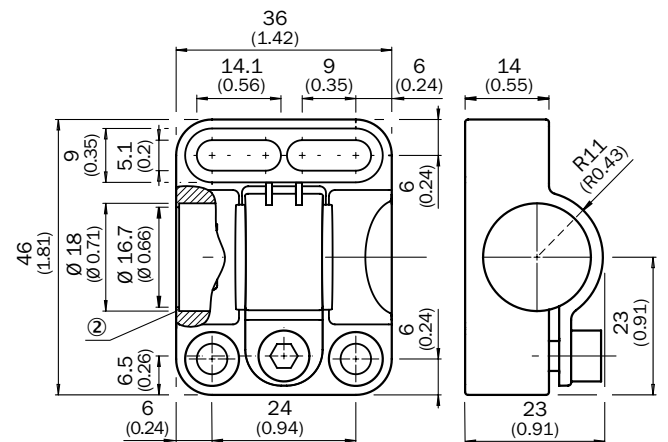


① Without fixed stop

BEF-KHF-M12

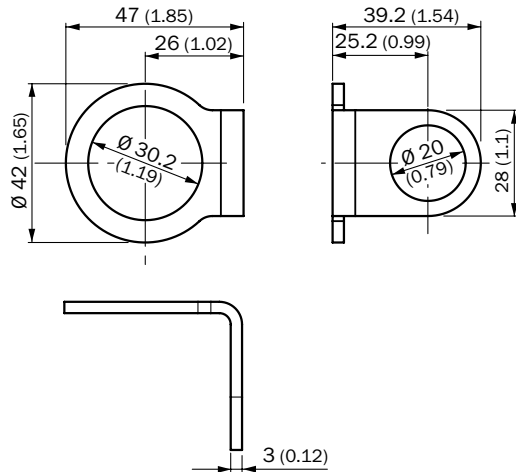


BEF-KHF-M18

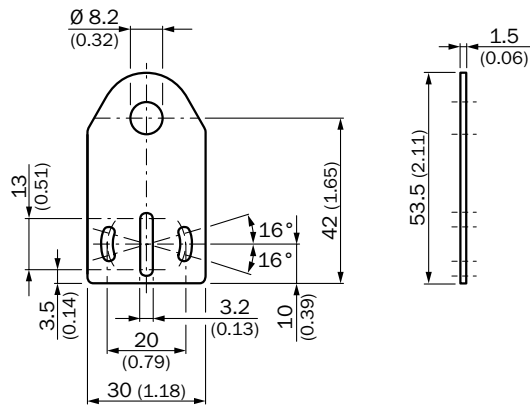


② With fixed stop

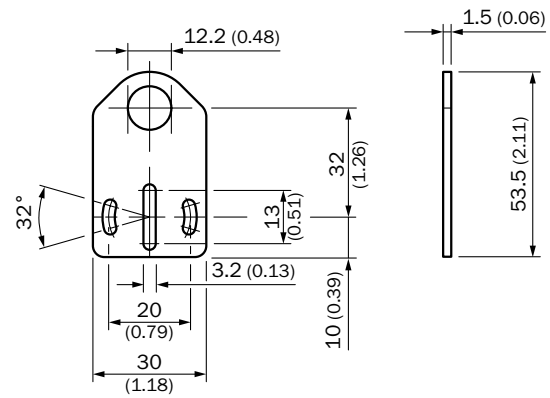
BEF-KHS-N10



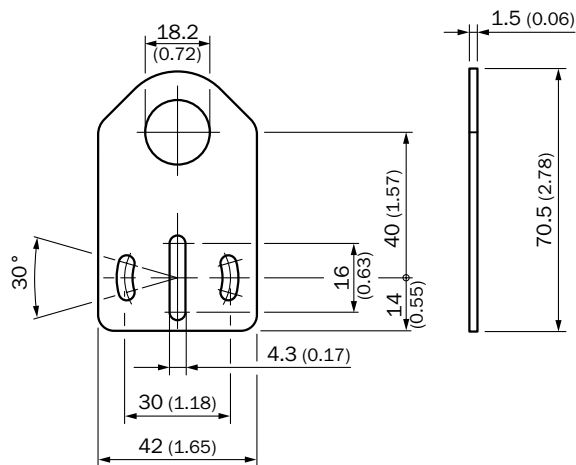
BEF-WG-M08



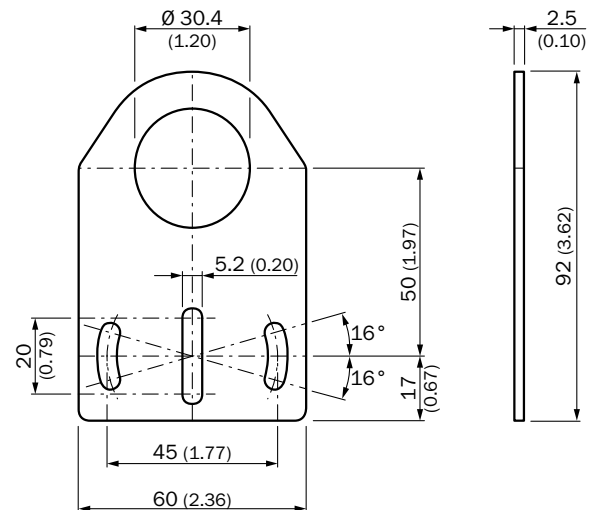
BEF-WG-M12



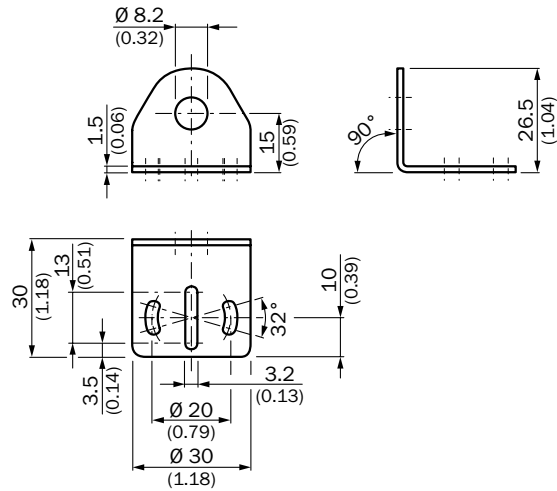
BEF-WG-M18



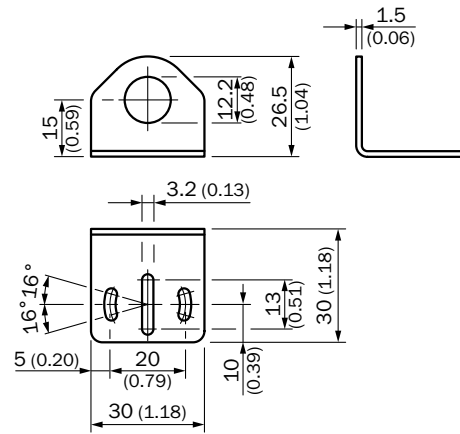
BEF-WG-M30



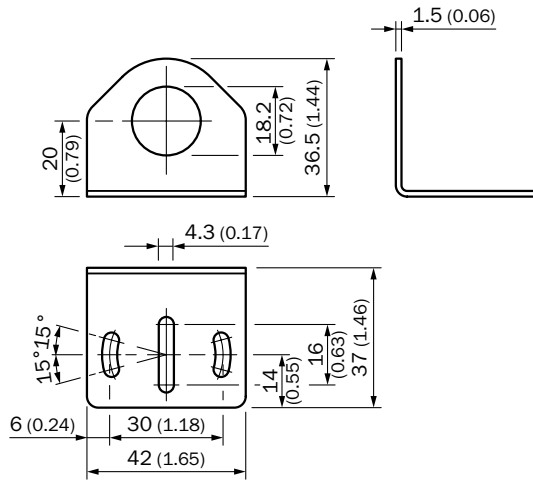
BEF-WN-M08



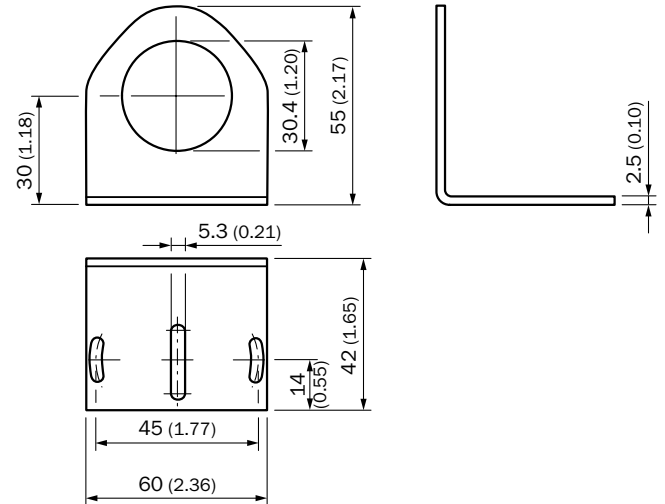
BEF-WN-M12



BEF-WN-M18



BEF-WN-M30



## REGISTER AT WWW.SICK.COM TODAY AND ENJOY ALL THE BENEFITS

- ✓ Select products, accessories, documentation and software quickly and easily.
- ✓ Create, save and share personalized wish lists.
- ✓ View the net price and date of delivery for every product.
- ✓ Requests for quotation, ordering and delivery tracking made easy.
- ✓ Overview of all quotations and orders.
- ✓ Direct ordering: submit even very complex orders in moments.
- ✓ View the status of quotations and orders at any time. Receive e-mail notifications of status changes.
- ✓ Easily repeat previous orders.
- ✓ Conveniently export quotations and orders to work with your systems.



## SERVICES FOR MACHINES AND SYSTEMS: SICK LifeTime Services

Our comprehensive and versatile LifeTime Services are the perfect addition to the comprehensive range of products from SICK. The services range from product-independent consulting to traditional product services.



**Consulting and design**  
Safe and professional



**Product and system support**  
Reliable, fast and on-site



**Verification and optimization**  
Safe and regularly inspected



**Upgrade and retrofits**  
Easy, safe and economical



**Training and education**  
Practical, focused and professional

## SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With almost 7,000 employees and over 50 subsidiaries and equity investments as well as numerous representative offices worldwide, we are always close to our customers. 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 various 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 round out 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:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and additional representatives → [www.sick.com](http://www.sick.com)