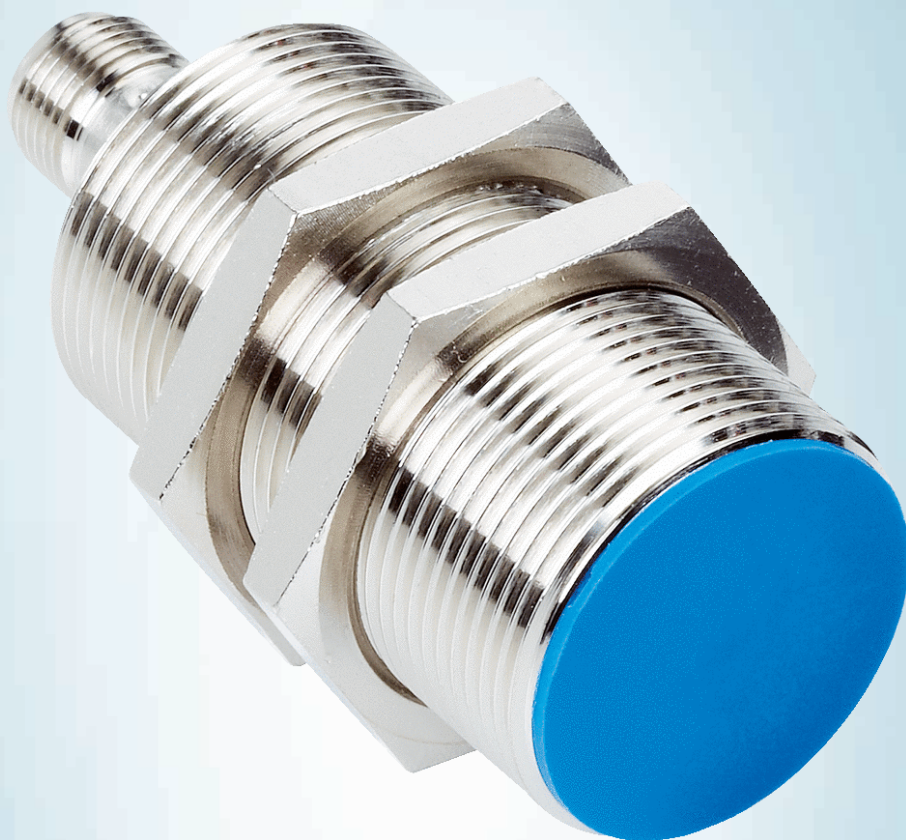




# IMC30-10BPDZC0SA05

SAM

INDUCTIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

| Type               | part no. |
|--------------------|----------|
| IMC30-10BPDZC0SA05 | 1061704  |

Included in delivery: BEF-MU-M30 (1)

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

## Detailed technical data

### Features

|                                                   |                                                                                                       |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Housing</b>                                    | Metric                                                                                                |
| <b>Thread size</b>                                | M30 x 1.5                                                                                             |
| <b>Diameter</b>                                   | Ø 30 mm                                                                                               |
| <b>Sensing range <math>S_n</math></b>             | 10 mm                                                                                                 |
| <b>Safe sensing range <math>S_a</math></b>        | 8.1 mm                                                                                                |
| <b>Installation type</b>                          | Flush                                                                                                 |
| <b>Connection type</b>                            | Male connector M12, 4-pin                                                                             |
| <b>Switching output</b>                           | PNP                                                                                                   |
| <b>Switching output detail</b>                    | PNP                                                                                                   |
| <b>Output <math>Q_{imp}</math></b>                | Pulse output (pulse train corresponds to the activation rate)                                         |
| <b>Output <math>Q</math></b>                      | Output type (dependant on the adjusted threshold)                                                     |
| <b>Output function</b>                            | NO                                                                                                    |
| <b>Electrical wiring</b>                          | DC 4-wire                                                                                             |
| <b>Speed range, adjustable via two thresholds</b> | 6 ... 12,000 pulses/min <sup>1)</sup>                                                                 |
| <b>Acceleration range, adjustable</b>             | 0.1 ... 2 pulses/s <sup>2</sup> <sup>2)</sup>                                                         |
| <b>Time delay, adjustable</b>                     | Mode 0: No start-up delay, Mode 1: 0...254 s, configurable, Mode 2: When reaching the upper threshold |
| <b>Enclosure rating</b>                           | IP67 <sup>3)</sup>                                                                                    |
| <b>Special features</b>                           | Speed monitor                                                                                         |
| <b>Items supplied</b>                             | Mounting nut, brass, nickel-plated (2x)                                                               |

<sup>1)</sup> Up to a max. pulse sequence of 12,000 pulses / min.

<sup>2)</sup> Up to a max. pulse sequence of 1.200 pulses / min.

<sup>3)</sup> According to EN 60529.

## Mechanics/electronics

|                                             |                                                                   |
|---------------------------------------------|-------------------------------------------------------------------|
| <b>Supply voltage</b>                       | 10 V DC ... 30 V DC                                               |
| <b>Ripple</b>                               | ≤ 10 %                                                            |
| <b>Voltage drop</b>                         | ≤ 2.5 V <sup>1)</sup>                                             |
| <b>Hysteresis</b>                           | 5 % ... 15 % <sup>2)</sup>                                        |
| <b>Reproducibility</b>                      | ≤ 2 % <sup>3)</sup><br><sup>4)</sup>                              |
| <b>Temperature drift (of S<sub>r</sub>)</b> | ± 10 %                                                            |
| <b>EMC</b>                                  | According to EN 60947-5-2                                         |
| <b>Continuous current I<sub>a</sub></b>     | ≤ 100 mA                                                          |
| <b>Short-circuit 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>Status indicator Q<sub>Imp</sub></b>     | LED, yellow                                                       |
| <b>Status indicator Q</b>                   | LED, blue                                                         |
| <b>Ambient operating temperature</b>        | -25 °C ... +75 °C                                                 |
| <b>Housing material</b>                     | Brass, nickel-plated                                              |
| <b>Sensing face material</b>                | Plastic, LCP                                                      |
| <b>Housing length</b>                       | 71 mm                                                             |
| <b>Thread length</b>                        | 54 mm                                                             |
| <b>Tightening torque, max.</b>              | ≤ 100 Nm                                                          |
| <b>Minimum response time</b>                | Mode speed monitoring 50 ms<br>Mode acceleration monitoring 1 sec |

<sup>1)</sup> At I<sub>a</sub> max.<sup>2)</sup> Of S<sub>n</sub>.<sup>3)</sup> Supply voltage U<sub>B</sub> and constant ambient temperature T<sub>a</sub>.<sup>4)</sup> Of S<sub>r</sub>.

## Safety-related parameters

|                         |             |
|-------------------------|-------------|
| <b>MTTF<sub>D</sub></b> | 1,046 years |
| <b>DC<sub>avg</sub></b> | 0 %         |

## Communication interface

|                                       |                                                                                                                                                                                                        |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Communication interface</b>        | IO-Link V1.0                                                                                                                                                                                           |
| <b>Communication Interface detail</b> | COM2 (38,4 kBaud)                                                                                                                                                                                      |
| <b>Cycle time</b>                     | 5 ms                                                                                                                                                                                                   |
| <b>Process data length</b>            | 16 Bit                                                                                                                                                                                                 |
| <b>Process data structure</b>         | 14 bit measured value<br>1 bit pulse output<br>1 bit switching output                                                                                                                                  |
| <b>Factory setting</b>                | Operating mode: acceleration monitoring<br>Upper/lower threshold speed: 200/300 pulses/min<br>Threshold acceleration: 1 pulse/sec <sup>2</sup><br>Start-up delay mode: time delay<br>Time delay: 5 sec |

### Reduction factors

| Note                              | The values are reference values which may vary |
|-----------------------------------|------------------------------------------------|
| <b>St37 steel (Fe)</b>            | 1                                              |
| <b>Stainless steel (V2A, 304)</b> | 0.8                                            |
| <b>Aluminum (Al)</b>              | 0.45                                           |
| <b>Copper (Cu)</b>                | 0.4                                            |
| <b>Brass (Br)</b>                 | 0.4                                            |

### Installation note

|               |                                       |
|---------------|---------------------------------------|
| <b>Remark</b> | Associated graphic see "Installation" |
| <b>B</b>      | 30 mm                                 |
| <b>C</b>      | 30 mm                                 |
| <b>D</b>      | 30 mm                                 |
| <b>F</b>      | 80 mm                                 |

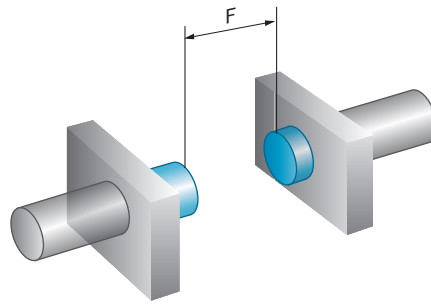
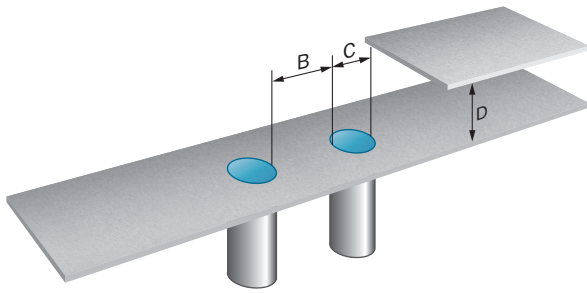
### Certificates

|                                                                              |   |
|------------------------------------------------------------------------------|---|
| <b>EU declaration of conformity</b>                                          | ✓ |
| <b>UK declaration of conformity</b>                                          | ✓ |
| <b>Moroccan declaration of conformity</b>                                    | ✓ |
| <b>China RoHS</b>                                                            | ✓ |
| <b>IO-Link certificate</b>                                                   | ✓ |
| <b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b> | ✓ |

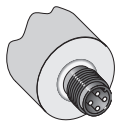
### Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270101 |
| <b>ECLASS 5.1.4</b>   | 27270101 |
| <b>ECLASS 6.0</b>     | 27270101 |
| <b>ECLASS 6.2</b>     | 27270101 |
| <b>ECLASS 7.0</b>     | 27270101 |
| <b>ECLASS 8.0</b>     | 27270101 |
| <b>ECLASS 8.1</b>     | 27270101 |
| <b>ECLASS 9.0</b>     | 27270101 |
| <b>ECLASS 10.0</b>    | 27270101 |
| <b>ECLASS 11.0</b>    | 27270101 |
| <b>ECLASS 12.0</b>    | 27274001 |
| <b>ETIM 5.0</b>       | EC002714 |
| <b>ETIM 6.0</b>       | EC002714 |
| <b>ETIM 7.0</b>       | EC002714 |
| <b>ETIM 8.0</b>       | EC002714 |
| <b>UNSPSC 16.0901</b> | 39122230 |

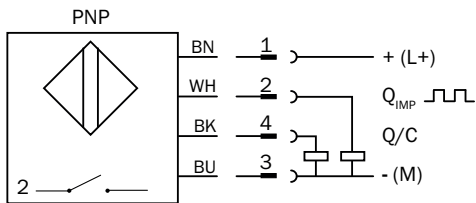
## Installation note Flush installation



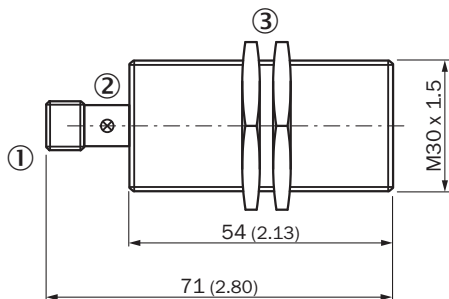
## Connection type



## Connection diagram Cd-226



## Dimensional drawing IME30 Standard, connector, flush



Dimensions in mm (inch)

① Connection

② Display LED

③ Fastening nuts (2x); width across 36, metal

Recommended accessories

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

|                                                                                   | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Type             | part no. |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|
| integration modules and adapters                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |          |
|  | <ul style="list-style-type: none"><li><b>Description:</b> Number of IO-Link ports: 4; Communication mode: COM1/COM2; IO-Link version: IO-Link V1.0; Switching input: PNP; Supply voltage Vs, IO-Link ports: DC 24 V; Current loading: 800 mA; Data transmission rate: Max. 12 MBaud, Autobaud; Address space occupation: 1 bis 126; Connection type: Connector M12; Connection type, IO-Link ports: Connector M12, 5-pin; Supply voltage Vs, module: DC 18 ... 30 V; Power consumption: Typ. 75 mA / max. 100 mA (at UL with DC 24 V), Typ. 25 mA + sensor current / max. 80</li></ul> | IOLSHPB-P3104R01 | 6039728  |

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Type               | part no. |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |          |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li> </ul>                                                                                                                                                                                        | DOS-1204-G         | 6007302  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li> </ul>                                                                                                                                                                                          | DOS-1204-W         | 6007303  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YF2A14-020UB3XLEAX | 2095607  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YF2A14-050UB3XLEAX | 2095608  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YG2A14-020UB3XLEAX | 2095766  |
|   | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YG2A14-050UB3XLEAX | 2095767  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with chemicals</li> </ul>                                                      | YF2A14-020VB3XLEAX | 2096234  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with chemicals</li> </ul>                                                      | YF2A14-050VB3XLEAX | 2096235  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with chemicals</li> </ul>                                                        | YG2A14-020VB3XLEAX | 2095895  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Uncontaminated zones, Zones with chemicals</li> </ul>                                                        | YG2A14-050VB3XLEAX | 2095897  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> </ul>                                                                                                              | YF2A14-C60UB3XLEAX | 2145654  |

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Type               | part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
|    | <ul style="list-style-type: none"> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YF2A14-010UB3XLEAX | 2145655  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 3 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>                                                                                                                | YF2A14-030UB3XLEAX | 2145656  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>                                                                                                                | YG2A14-C60UB3XLEAX | 2145657  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>                                                                                                                  | YG2A14-010UB3XLEAX | 2145658  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with chemicals</li> </ul>                                                                                                                                                                        | YG2A14-C60VB3XLEAX | 2145709  |
|   | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with chemicals</li> </ul>                                                                                                                                                                          | YG2A14-010VB3XLEAX | 2145710  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with chemicals</li> </ul>                                                                                                                                                                      | YF2A14-C60VB3XLEAX | 2145707  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with chemicals</li> </ul>                                                                                                                                                                        | YF2A14-010VB3XLEAX | 2145708  |
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting plate for M30 sensors</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated</li> <li><b>Items supplied:</b> Without mounting hardware</li> </ul>                                                                                                                                                                                                                                                                                                                                                  | BEF-WG-M30         | 5321871  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for M30 sensors</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated</li> <li><b>Items supplied:</b> Without mounting hardware</li> </ul>                                                                                                                                                                                                                                                                                                                                                | BEF-WN-M30         | 5308445  |



## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)