

## IB120121

### Inductive sensors • Norm switching distance

sensor inductive, M12x1 60long, Flush, Sn: 3, 10-30V DC, PNP NO, Connector M12 3pin, IP67, Brass Nickel-plated

including Nut



The IB120121 is an inductive sensor that can detect conductive metals at short distances without being affected by other materials. This makes it ideal for use in soiling areas and harsh environmental conditions.

The sensor is manufactured in accordance with EN 60947-5-2 and is suitable for standard applications. The switching distance is set at the factory using a norm measuring plate whose edge length corresponds to the diameter of the sensor surface.

In accordance with the standard, the IB120121 flush-mounted sensor achieves a switching distance of 3 mm. The cylindrical housing of the sensor is made of brass and has an M12x1 thread. The electrical connection is made via a 3-pin M12 plug connector.

#### Electrical features

|                                   |                            |
|-----------------------------------|----------------------------|
| Display                           | LED display                |
| Type of switching function        | Normally open contact (NO) |
| Type of electrical connection     | Connector M12              |
| Type of switching output          | PNP                        |
| Rated switching current           | 200 mA                     |
| Relative hysteresis               | 15 %                       |
| Correction factor (aluminum)      | 0.3                        |
| Correction factor (copper)        | 0.2                        |
| Correction factor (brass)         | 0.4                        |
| Correction factor (St37)          | 1                          |
| Correction factor (stainl. steel) | 0.7                        |
| Short-circuit protection          | Yes                        |
| No-load current                   | 15 mA                      |
| Number of pins                    | 3                          |
| Relative repeat accuracy          | 10 %                       |
| Switching distance                | 3 mm                       |
| Switching frequency               | 800 Hz                     |
| Voltage drop                      | 2 V                        |
| Reverse polarity protection       | Yes                        |
| Operating voltage (DC)            | 10 - 30 V                  |

**Mechanical features**

|                                          |                        |
|------------------------------------------|------------------------|
| Alignment of cable entry                 | axial                  |
| Design                                   | Cylinder, screw-thread |
| Thread length                            | 40 mm                  |
| Thread pitch                             | 1 mm                   |
| Cable infeed                             | axial                  |
| Length                                   | 60 mm                  |
| Mechanical mounting condition for sensor | flush                  |
| Surface                                  | nickel-plated          |
| Degree of protection (IP)                | IP67                   |
| Active area material of sensor           | Plastic (PBT)          |
| Housing material                         | Brass                  |
| Thread dimension                         | M12                    |
| Ambient temperature                      | -25 - 70 °C            |

**Other features**

|                           |                                          |
|---------------------------|------------------------------------------|
| Reference medium / object | Standard measuring plate FE360 12x12x1mm |
|---------------------------|------------------------------------------|

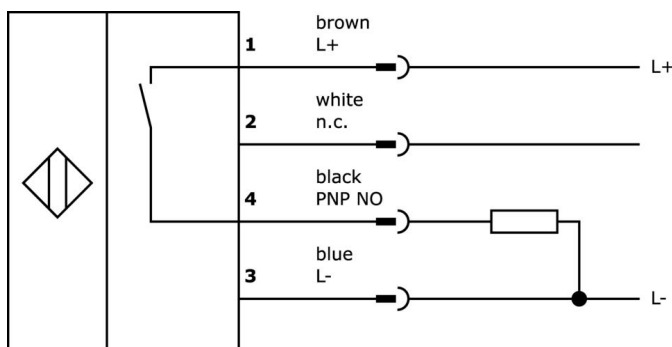
**Classification**

|        |                                     |
|--------|-------------------------------------|
| ETIM 8 | EC002714 Inductive proximity switch |
|--------|-------------------------------------|

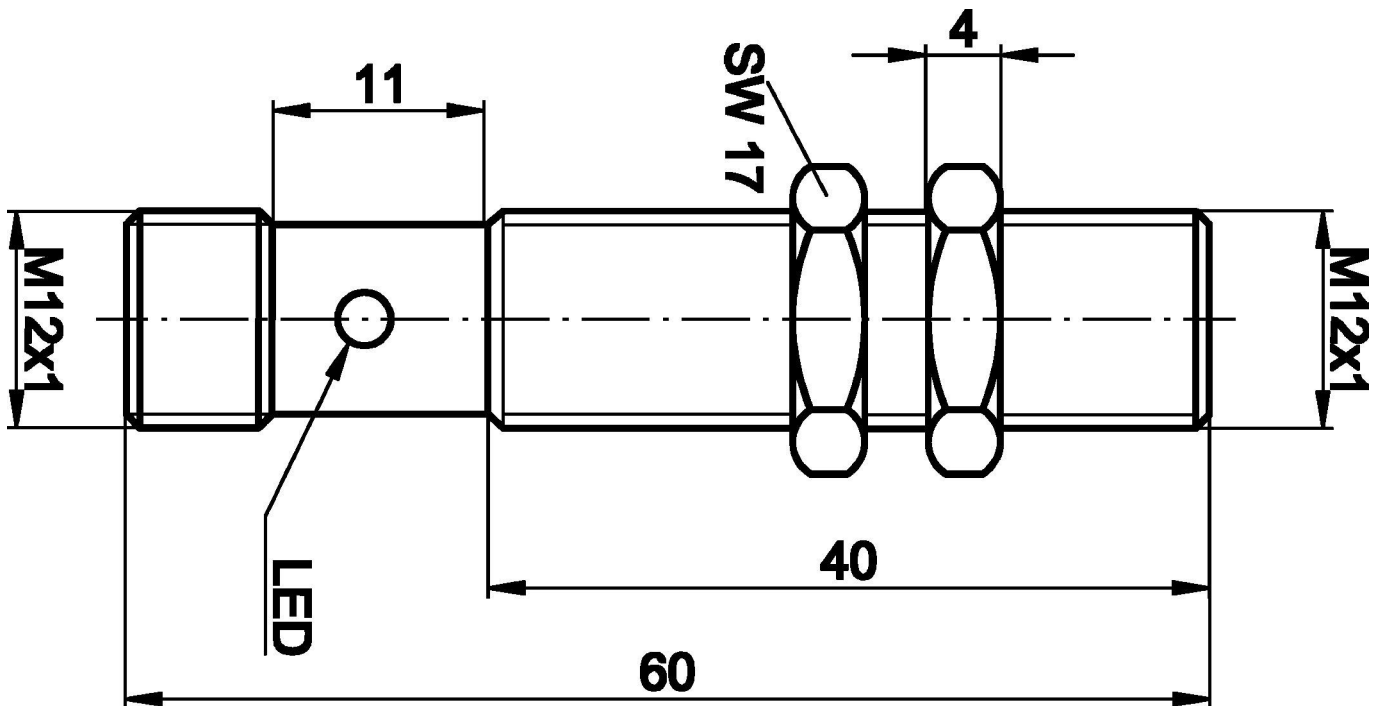
**More**

|                       |                       |
|-----------------------|-----------------------|
| IPF Product Group     | 200 inductive sensors |
| packaging dimensions  | 120 x 100 x 17 mm     |
| gross weight          | 30 g                  |
| Customs tariff number | 85365019              |
| WEEE number           | 40951076              |
| OzDS-compliant        | Yes                   |
| POP-compliant         | Yes                   |
| Reach-compliant       | Yes                   |
| RoHS-compliant        | Yes                   |
| MTTF                  | 2225 year(s)          |

**Connection**




**Dimensional drawing**




**Extract accessories program**

**VK030F62**



Connection cable, 0.3m, M12 socket 3-pin angular, M8 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK060F62**




Connection cable, 0.6m, M12 socket 3-pin angular, M8 connector 3-pin straight, 3x0.34mm<sup>2</sup>, PUR (polyurethane), IP67, LED, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**AY000156**




accessories sensor, Clamp sleeve, M16x1 31long, Brass White bronze

**VK200021**




Connection cable, 2m, M12 Female (socket) 3pin Angular, Free conductor end, 3x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.3mm, 250V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**VK200025**



Connection cable, 2m, M12 Female (socket) 3pin Straight, Free conductor end, 3x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.3mm, 250V, -30-90°C, IP67, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**AY000115**




accessories sensor, Fixture kit, Metal, ball joint

**AY000162**




Accessories, magnetic, Ø43mm, neodymium-iron-boron, inside thread M5, rubber

**VK003021**



Cable socket, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

**VK003025**



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

You can find further accessories on our homepage

**Installation**

Mounting / installation may only be carried out by a qualified electrician!

**Disposal**

WEEE number according to § 6 para. 3  
ElektroG: 40951076

**Safety warnings**

- / Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.
- / Never use these devices in applications where the safety of a person depends on their functionality.