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DATA SHEET

IMB12-08NPSVUDKS22

IMB
Inductive proximity sensors

SICK Sensor Intelligence

INDUCTIVE PROXIMITY SENSORS

IMB12-08NPSVUD-
KS22

ORDERING INFORMATION

| Type | part no. |
|--------------------|----------|
| IMB12-08NPSVUDKS22 | 1137042 |

Further device versions and accessories at www.sick.com/IMB



Illustration may differ

DETAILED TECHNICAL DATA

FEATURES

| | |
|--------------------------|---|
| Housing | Metric |
| Housing | Short-body |
| Thread size | M12 x 1 |
| Diameter | Ø 12 mm |
| Sensing range S_n | 8 mm |
| Safe sensing range S_s | 6.48 mm |
| Installation type | Non-flush |
| Switching frequency | 2,000 Hz |
| Connection type | Cable, 3-wire, 2.5 m |
| Switching output | PNP |
| Switching output detail | PNP |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP68 ¹⁾ IP69K ²⁾ |
| Special features | Resistant against coolant lubricants, Visual adjustment indicator, Temperature resistance |
| Special applications | Zones with coolants and lubricants, Mobile machines, Difficult application conditions |
| Items supplied | Mounting nut, V2A stainless steel, with locking teeth (2x) |

¹⁾ According to EN 60529.

²⁾ According to ISO 20653:2013-03.

MECHANICS/ELECTRONICS

| | |
|--|--|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | ≤ 10 % |
| Voltage drop | ≤ 2 V ¹⁾ |
| Hysteresis | 3 % ... 20 % |
| Reproducibility | ≤ 2 % ²⁾ ³⁾ |
| Temperature drift (of S _r) | ± 10 % |
| EMC | According to EN 60947-5-2 |
| Continuous current I _a | ≤ 200 mA |
| No load current | ≤ 10 mA |
| Cable material | PUR |
| Conductor size | 0.34 mm ² |
| Cable diameter | Ø 4.5 mm |
| Short-circuit protection | ✓ |
| Power-up pulse protection | ✓ |
| Shock and vibration resistance | 100 g / 2 ms / 500 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz / 1 mm; 55 Hz ... 500 Hz / 60 g |
| Ambient operating temperature | -40 °C ... +100 °C |
| Housing material | Stainless steel V2A, DIN 1.4305 / AISI 303 |
| Sensing face material | Plastic, LCP |
| Housing length | 34 mm |
| Thread length | 25 mm |
| Tightening torque, max. | Typ. 20 Nm ⁴⁾ Typ. 32 Nm ⁵⁾ |
| Protection class | III |
| UL File No. | E181493 |

¹⁾ At I_a max.²⁾ Supply voltage U_s and constant ambient temperature T_a.³⁾ Of S_r.⁴⁾ When using the non-toothed side of the nut.⁵⁾ Valid if toothed side of nut is used.**SAFETY-RELATED PARAMETERS**

| | |
|-------------------|-------------|
| MTTF _D | 1,971 years |
| DC _{avg} | 0 % |

COMMUNICATION INTERFACE

| | |
|--------------------------------|--|
| Communication interface | IO-Link V1.0 |
| Communication Interface detail | COM2 (38,4 kBaud) |
| Process data length | 1 Byte |
| Process data structure | Bit 0 = S _r reached Bit 1 = S _a reached |

REDUCTION FACTORS

| | |
|----------------------------|--|
| Note | The values are reference values which may vary |
| St37 steel (Fe) | 1 |
| Stainless steel (V2A, 304) | Approx. 0.67 |

INDUCTIVE PROXIMITY SENSORS - IMB12-08NPSVUDKS22

| | |
|---------------|--------------|
| Aluminum (Al) | Approx. 0.42 |
| Copper (Cu) | Approx. 0.35 |
| Brass (Br) | Approx. 0.42 |

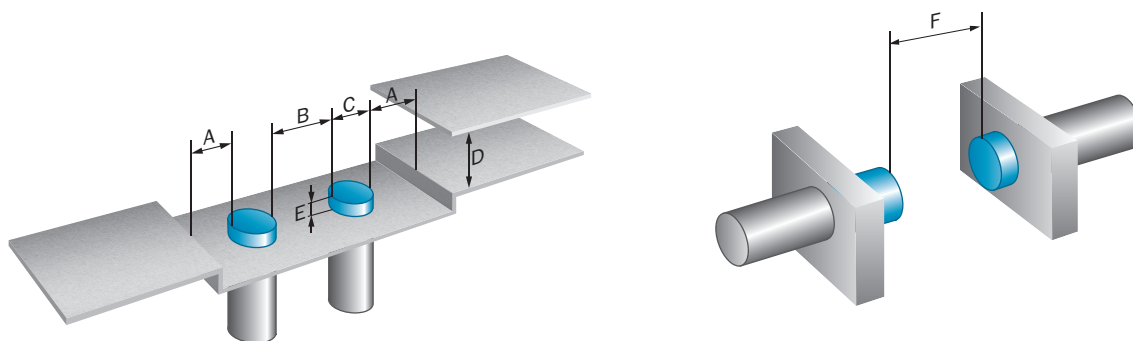
INSTALLATION NOTE

| Remark | Associated graphic see "Installation" |
|--------|---------------------------------------|
| A | 12 mm |
| B | 24 mm |
| C | 12 mm |
| D | 24 mm |
| E | 16 mm |
| F | 64 mm |

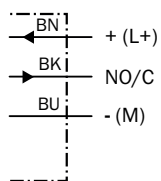
CERTIFICATES

| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

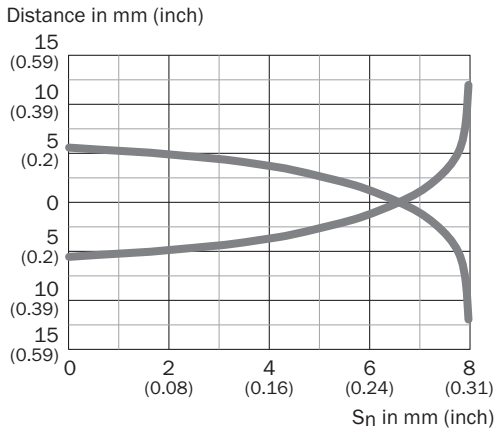
INSTALLATION NOTE NON-FLUSH INSTALLATION



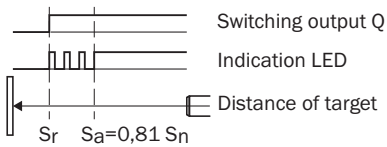
CONNECTION DIAGRAM CD-452



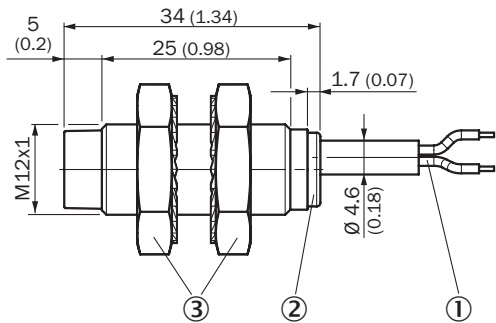
RESPONSE DIAGRAM



FUNCTIONAL PRINCIPLE INSTALLATION AID



DIMENSIONAL DRAWING IMB12 SHORT-BODY HOUSING, CABLE, NON-FLUSH



Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Fastening nuts (2 x); width across 17, stainless steel V2A

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1137042



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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