SICK.COM



DATA SHEET

# IHM06-02BPSVT0G

IMM
Inductive proximity sensors

SICK Sensor Intelligence



Illustration may differ

# INDUCTIVE PROXIMITY SENSORS

# IHM06-02BPSVT0G

## ORDERING INFORMATION

| Type | part no. |
|---|---|
| IHM06-02BPSVT0G | 1101121 |

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

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| Housing | Cylindrical |
| Housing | Extremely short model |
| Diameter | Ø 6.5 mm |
| Sensing range $S_n$ | 2 mm |
| Safe sensing range $S_a$ | 1.62 mm |
| Installation type | Flush |
| Switching frequency | 5,000 Hz |
| Connection type | Connector M8, 3-pin |
| Switching output | PNP |
| Switching output detail | PNP |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP67 [1] |
| Special features | Visual adjustment indicator |

[1] According to EN 60529.

### MECHANICS/ELECTRONICS

| | |
|---|---|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | ≤ 20 % [1] |
| Voltage drop | ≤ 2 V [2] |
| Time delay before availability | ≤ 50 ms |

[1] Of $V_s$.

[2] With Ia = 200 mA.

[3] Supply voltage $U_a$ and constant ambient temperature Ta.

| | |
|---|---|
| Hysteresis | 1 % ... 10 % |
| Reproducibility | ≤ 2 % [3] |
| Temperature drift (of $S_r$) | ≤ 10 % |
| EMC | EN 60947-5-2 |
| Continuous current $I_a$ | ≤ 200 mA |
| Short-circuit protection | ✓ |
| Power-up pulse protection | ✓ |
| Shock and vibration resistance | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| Ambient operating temperature | –25 °C ... +70 °C |
| Housing material | Stainless steel V2A, DIN 1.4305 / AISI 303 |
| Sensing face material | Plastic, LCP |
| Housing length | 29 mm |
| UL File No. | NRKH.E348498 |

[1] Of $V_S$.

[2] With Ia = 200 mA.

[3] Supply voltage $U_B$ and constant ambient temperature Ta.

## SAFETY-RELATED PARAMETERS

| | |
|---|---|
| $MTTF_D$ | 1,330 years |
| $DC_{avg}$ | 0 % |

## COMMUNICATION INTERFACE

| | |
|---|---|
| Communication interface | IO-Link V1.1 |
| Communication Interface detail | COM2 (38,4 kBaud) |
| Cycle time | 10.4 ms |
| Process data length | 1 Byte |
| Process data structure | Bit 0 = Sr reached<br>Bit 1 = Sa reached |

## REDUCTION FACTORS

| | |
|---|---|
| Note | The values are reference values which may vary |
| St37 steel (Fe) | 1 |
| Stainless steel (V2A, 304) | Approx. 0.75 |
| Aluminum (Al) | Approx. 0.5 |
| Copper (Cu) | Approx. 0.43 |
| Brass (Br) | Approx. 0.54 |

## INSTALLATION NOTE

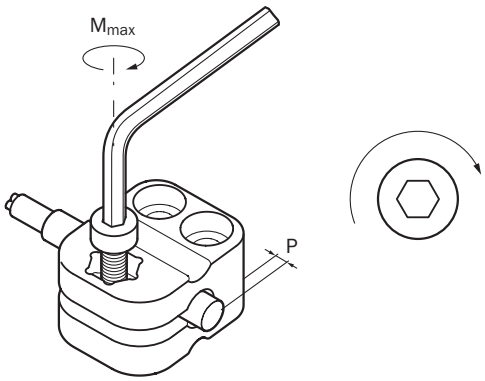
| | |
|---|---|
| Remark | Associated graphic see "Installation note" |
| B | 6 mm |
| C | 6.5 mm |
| D | 6 mm |
| F | 16 mm |

## CERTIFICATES

| | |
|---|---|
| EU declaration of conformity | ✓ |

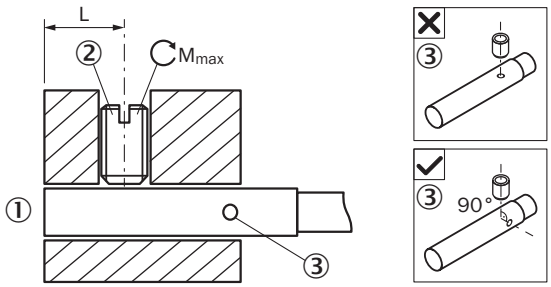
| | |
|---|---|
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |
| Information according to Art. 3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

## INSTALLATION NOTE MOUNTING USING BEF-KH-M06 BRACKET




| Sensor type | Mounting adapter | Overrun (P) | Max. tightening torque ($M_{max}$) |
|---|---|---|---|
| IHM06-1B5******<br>IHM06-02B******<br>IHM06-03B****** | BEF-KH-M06, part no. 2101067 | ≥ 0 mm | ≤ 0.6 Nm |

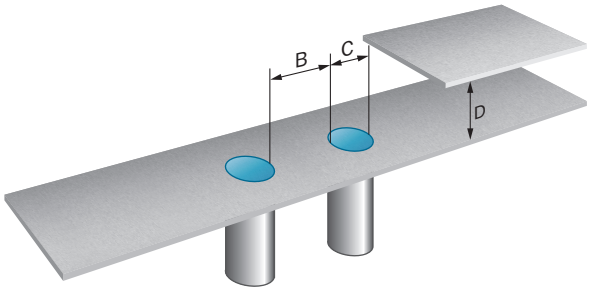
## INSTALLATION NOTE FIXING WITH SETSCREW

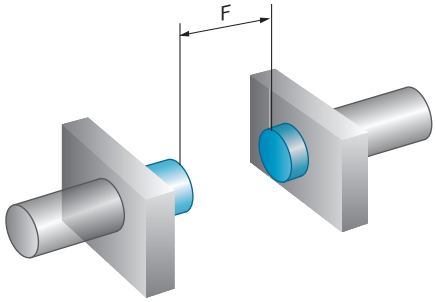



① Sensing face
② Recommended setscrew: M3, flat point
③ Display LED

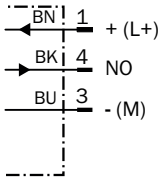
| Sensor type | Mounting area (L) | Max. tightening torque ($M_{max}$) |
|---|---|---|
| IHM06-********G | 6 mm ... 11 mm | ≤ 0.4 Nm |
| IHM06-******T0G | 6 mm ... 21 mm | ≤ 0.4 Nm |
| IHM06-********K | 6 mm ... 21 mm | ≤ 0.4 Nm |
| IHM06-******T0K | 6 mm ... 32 mm | ≤ 0.4 Nm |
| IHM06-********S | 6 mm ... 32 mm | ≤ 0.4 Nm |
| IHM06-******T0S | 6 mm ... 42 mm | ≤ 0.4 Nm |

## INSTALLATION NOTE FLUSH INSTALLATION

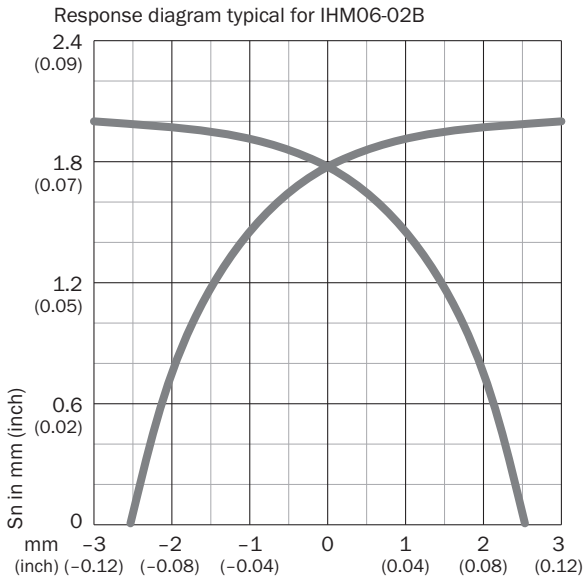



## CONNECTION DIAGRAM CD-002

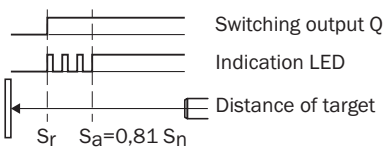



## RESPONSE DIAGRAM

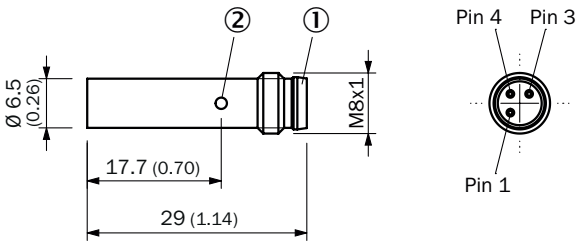



All dimensions in mm (inch)

## FUNCTIONAL PRINCIPLE INSTALLATION AID



**DIMENSIONAL DRAWING IHM06, EXTREMELY SHORT VARIANT, FLUSH, MALE CONNECTOR**




Dimensions in mm (inch)
① Connection
② function indicator

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/1101121

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