



DATA SHEET

IMM04-01BPSVU2S

IMM
Inductive proximity sensors

SICK Sensor Intelligence



Illustration may differ

INDUCTIVE PROXIMITY SENSORS

IMM04-01BPSVU2S

ORDERING INFORMATION

Type	part no.
IMM04-01BPSVU2S	1101613

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



DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Housing	Standard design
Thread size	M4 x 0.5
Diameter	Ø 4 mm
Sensing range S_n	1 mm
Safe sensing range S_a	0.81 mm
Installation type	Flush
Switching frequency	4,200 Hz
Connection type	Cable, 3-wire, 2 m
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 ¹⁾
Special features	Visual adjustment indicator
Items supplied	Mounting nut, V2A stainless steel (2x) Washer, V2A stainless steel, with locking teeth (2x) Cable flag, Polymatic 50 (1 x)

¹⁾ According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
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¹⁾ Of V_s .

²⁾ With $I_a \approx 200$ mA.

³⁾ Supply voltage U_s and constant ambient temperature T_a .

Ripple	$\leq 20\%$ ¹⁾
Voltage drop	$\leq 2\text{ V}$ ²⁾
Time delay before availability	$\leq 10\text{ ms}$
Hysteresis	1% ... 15%
Reproducibility	$\leq 2.5\%$ ³⁾
Temperature drift (of S _i)	$\leq 10\%$
EMC	EN 60947-5-2
Continuous current I _a	$\leq 100\text{ mA}$
Cable material	PUR
Conductor size	0.08 mm ²
Cable diameter	Ø 2.5 mm
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	22 mm
Thread length	20 mm
Tightening torque, max.	$\leq 0.8\text{ Nm}$
UL File No.	NRKH.E348498

¹⁾ Of V_s.

²⁾ With I_a = 200 mA.

³⁾ Supply voltage U_s and constant ambient temperature T_a.

SAFETY-RELATED PARAMETERS

MTTF _D	1,638 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 Bit 1 = Sa reached

REDUCTION FACTORS

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	Approx. 0.7
Aluminum (Al)	Approx. 0.49
Copper (Cu)	Approx. 0.4
Brass (Br)	Approx. 0.55

INSTALLATION NOTE

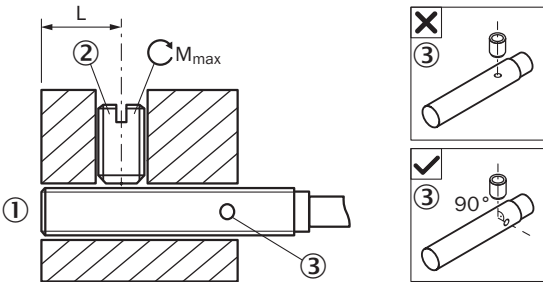
Remark	Associated graphic see "Installation note"
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B	3 mm
C	4 mm
D	3 mm
F	8.5 mm

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	✓

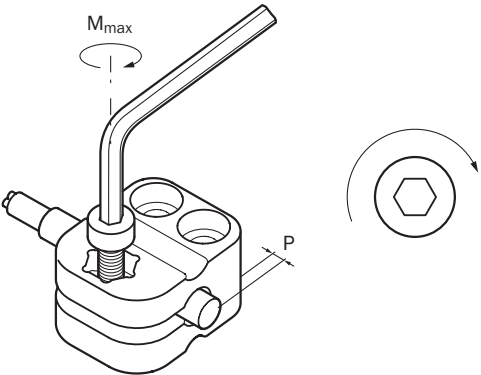
INSTALLATION NOTE FIXING WITH SETSCREW



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

Sensor type	Mounting area (L)	Max. tightening torque (M_{max})
IMM04-01B****K	5.5 mm ... 9 mm	$\leq 0.2 \text{ Nm}$
IMM04-0B6****S IMM04-01B****S	5.5 mm ... 19 mm	$\leq 0.2 \text{ Nm}$

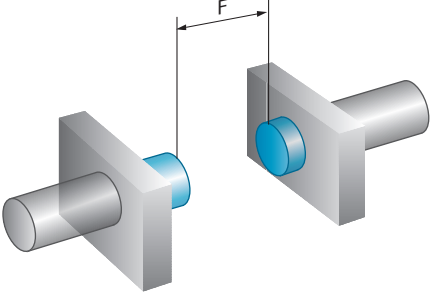
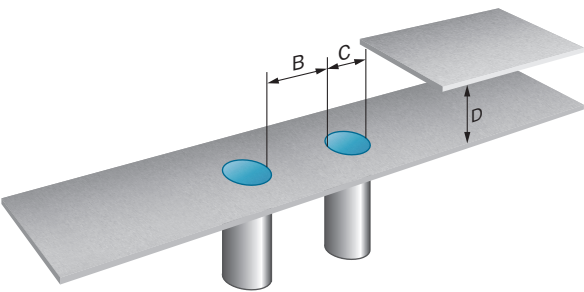
INSTALLATION NOTE MOUNTING USING BEF-KH-M04 BRACKET



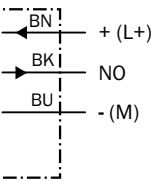
Sensor type	Mounting adapter	Overrun (P)	Max. tightening torque (M_{max})
IMM04-0B6****	BEF-KH-M04, part no. 2101065	$\geq 0 \text{ mm}$	$\leq 0.6 \text{ Nm}$

Sensor type	Mounting adapter	Overrun (P)	Max. tightening torque (M_{max})
IMM04-01B*****			

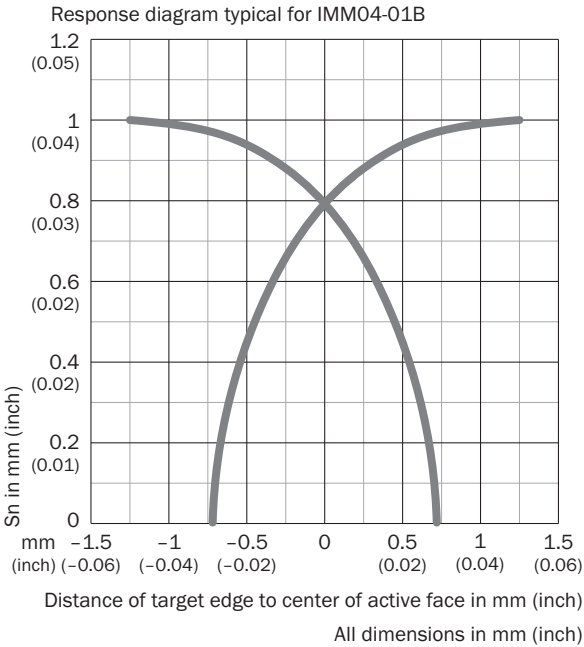
INSTALLATION NOTE FLUSH INSTALLATION



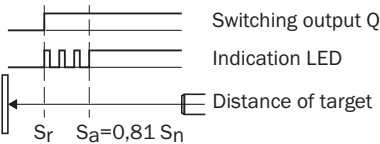
CONNECTION DIAGRAM CD-001



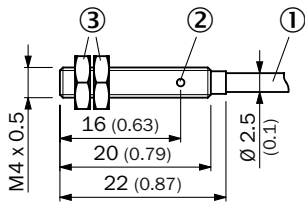
RESPONSE DIAGRAM



FUNCTIONAL PRINCIPLE INSTALLATION AID



DIMENSIONAL DRAWING IMM04, STANDARD VARIANT, FLUSH, CABLE



Dimensions in mm (inch)

- ① Connection
- ② function indicator
- ③ fastening nuts (2 x); 7 mm hex, stainless steel

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/1101613



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

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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