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DATA SHEET

IMM05-1B5PSVT0S

IMM
Inductive proximity sensors

SICK Sensor Intelligence



Illustration may differ

INDUCTIVE PROXIMITY SENSORS

IMM05-1B5PSVT0S

ORDERING INFORMATION

Type	part no.
IMM05-1B5PSVT0S	1101611

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

DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Housing	Standard design
Thread size	M5 x 0.5
Diameter	Ø 5 mm
Sensing range S_n	1.5 mm
Safe sensing range S_a	1.215 mm
Installation type	Flush
Switching frequency	4,800 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
Items supplied	Mounting nut, V2A stainless steel (2x) Washer, V2A stainless steel, with locking teeth (2x)

[1] According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 20 % [1]

[1] Of V_s.

[2] With Ia = 200 mA.

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

Voltage drop	≤ 2 V [2]
Time delay before availability	≤ 10 ms
Hysteresis	1 % ... 15 %
Reproducibility	≤ 2.5 % [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	38 mm
Thread length	20 mm
Tightening torque, max.	≤ 1.5 Nm
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

$MTTF_D$	1,350 years
DC_{avg}	0 %
T_M (mission time)	20 years

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. 0.76
Aluminum (Al)	Approx. 0.47
Copper (Cu)	Approx. 0.4
Brass (Br)	Approx. 0.54

INSTALLATION NOTE

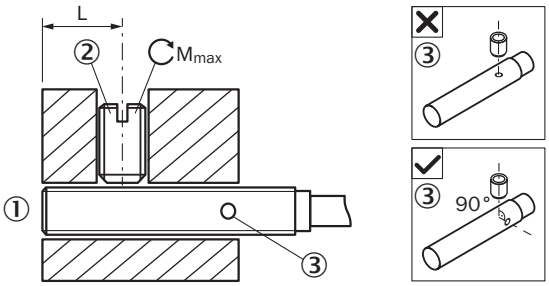
Remark	Associated graphic see "Installation note"
B	3 mm
C	5 mm
D	4.5 mm

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	✓

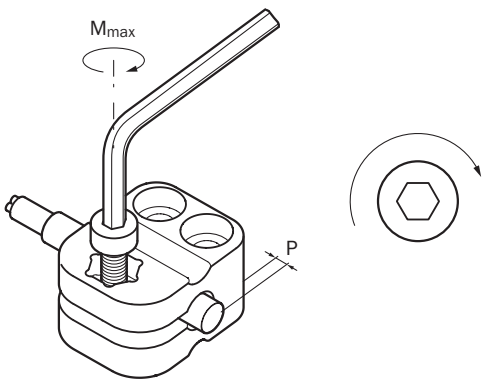
INSTALLATION NOTE FIXING WITH SETSCREW



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

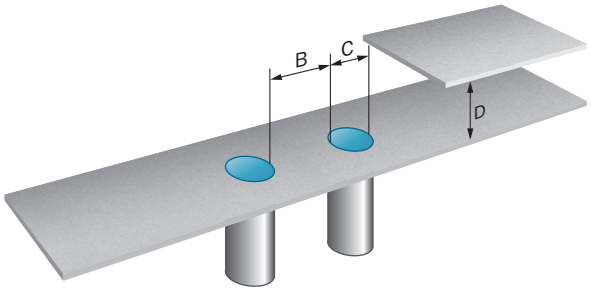
Sensor type	Mounting area (L)	Max. tightening torque (M_{max})
IMM05-1B5*****K	5.5 mm ... 9 mm	≤ 0.2 Nm
IMM05-0B8*****S IMM05-1B5*****S	5.5 mm ... 19 mm	≤ 0.2 Nm
IMM05-0B8***T0S IMM05-1B5***T0S	5.5 mm ... 18 mm	≤ 0.2 Nm

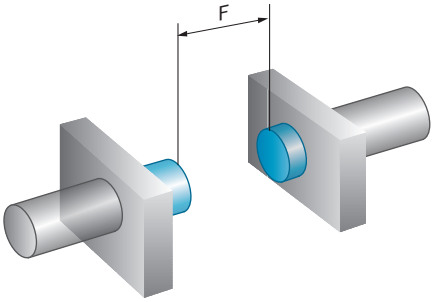
INSTALLATION NOTE MOUNTING USING BEF-KH-M05 BRACKET



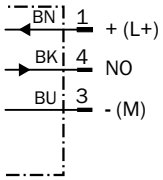
Sensor type	Mounting adapter	Overrun (P)	Max. tightening torque (M_{max})
IMM05-0B8****** IMM05-1B5******	BEF-KH-M05, part no. 2101066	≥ 0 mm	≤ 0.6 Nm

INSTALLATION NOTE FLUSH INSTALLATION



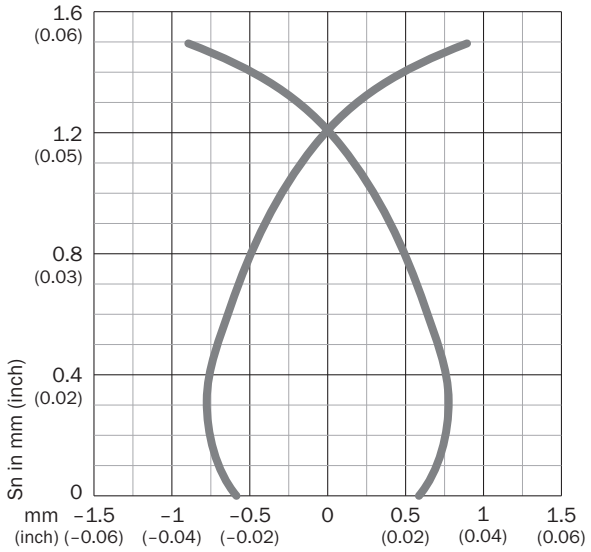


CONNECTION DIAGRAM CD-002



RESPONSE DIAGRAM

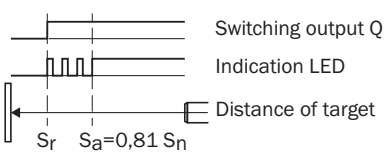
Response diagram typical for IMM05-1B5



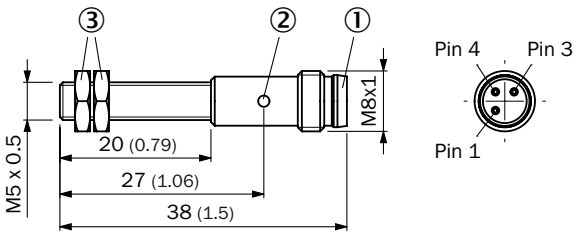
Distance of target edge to center of active face in mm (inch)

All dimensions in mm (inch)

FUNCTIONAL PRINCIPLE INSTALLATION AID



DIMENSIONAL DRAWING IMM05, STANDARD VARIANT, FLUSH, MALE CONNECTOR



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/1101611

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SICK AT A GLANCE

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