



IMM05-1B5PSVR8S

IMM

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
IMM05-1B5PSVR8S	1108733

Other models and accessories → 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	Cable with connector M8, 3-pin, 0.2 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
Ripple	≤ 20 % ¹⁾

¹⁾ Of V_S .

²⁾ With $I_a = 200$ mA.

³⁾ Supply voltage U_B and constant ambient temperature T_a .

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_r)	$\leq 10 \%$
EMC	EN 60947-5-2
Continuous current I_a	$\leq 200 \text{ mA}$
Cable material	PUR
Cable diameter	$\varnothing 2.9 \text{ mm}$
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	25 mm
Thread length	23 mm
Tightening torque, max.	$\leq 1.5 \text{ Nm}$
UL File No.	NRKH.E348498

1) Of V_S .

2) With $I_a = 200 \text{ mA}$.

3) Supply voltage U_B and constant ambient temperature T_a .

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"
B	3 mm
C	5 mm
D	4.5 mm
F	8.5 mm

Classifications

ECLASS 5.0	27270101
ECLASS 5.1.4	27270101
ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101
ECLASS 9.0	27270101
ECLASS 10.0	27270101
ECLASS 11.0	27270101
ECLASS 12.0	27274001
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC 16.0901	39122230

Certificates

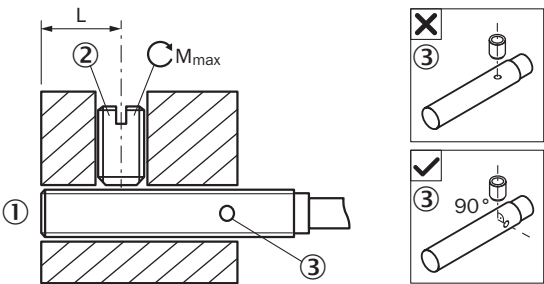
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
cULus certificate	✓
IO-Link certificate	✓

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

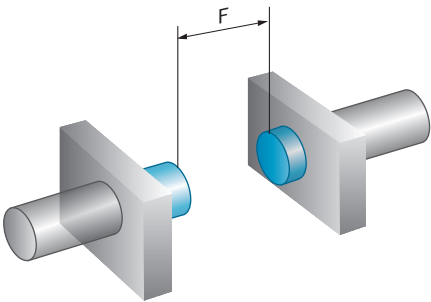
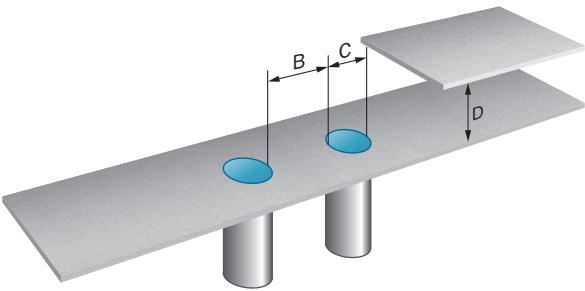
Installation note Fixing with setscrew



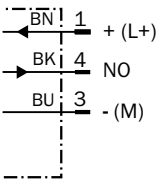
- ① Sensing face
- ② Recommended setscrew: M3, flat point
- ③ Display LED

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***TOS IMM05-1B5***TOS	5.5 mm ... 18 mm	≤ 0.2 Nm

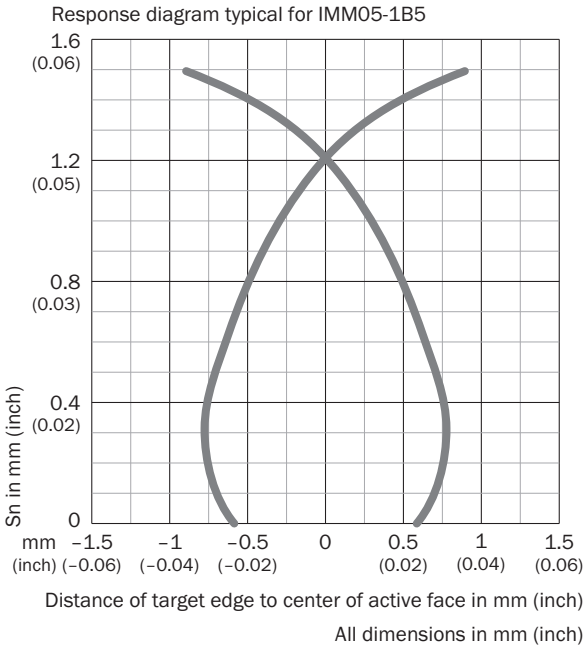
Installation note Flush installation



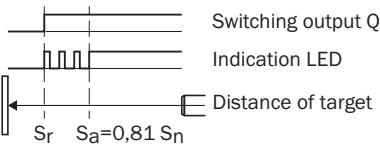
Connection diagram Cd-002



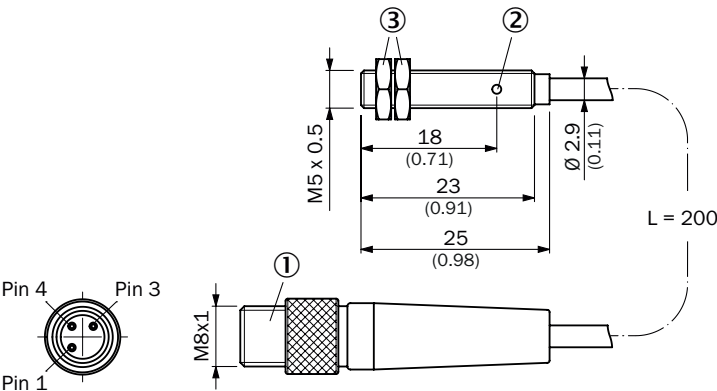
Response diagram



Functional principle Installation aid



Dimensional drawing IMM05, standard variant, flush, pigtail



Dimensions in mm (inch)

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

Recommended accessories

Other models and accessories → www.sick.com/IMM

	Brief description	Type	part no.
Mounting systems			
	• Material: Plastic • Details: Plastic (PA6) • Items supplied: Without mounting hardware • Usable for: Round sensors with 5 mm housing diameter without fixed stop	BEF-KH-M05	2101066

	Brief description	Type	part no.
connectors and cables			
	Number of slots: 4 Slot connection type: M8, 3-pin, A-coded, female connector Items supplied: 5 x labeling plates Description: Unshielded	Y8A34A2-C2A8000XXX	2115733
	Number of slots: 4 Slot connection type: M8, 3-pin, A-coded, female connector Items supplied: 5 x labeling plates Cable: 5 m, 6-wire, PUR, halogen-free Description: Unshielded Application: Drag chain operation	Y8A34A2-LXXXUAA050	2115727
	Number of slots: 6 Slot connection type: M8, 3-pin, A-coded, female connector Items supplied: 5 x labeling plates Description: Unshielded	Y8A36A2-C2A8000XXX	2115734
	Number of slots: 6 Slot connection type: M8, 3-pin, A-coded, female connector Items supplied: 5 x labeling plates Cable: 5 m, 8-wire, PUR, halogen-free Description: Unshielded Application: Drag chain operation	Y8A36A2-LXXXUBA050	2115728
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322
	Connection type head A: Male connector, M8, 3-pin, angled, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-WSK	6053170
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-020UA1XLEAX	2094782
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-050UA1XLEAX	2094788
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-020UA1XLEAX	2094794
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-050UA1XLEAX	2095586
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Male connector, M12, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-020UA1M2A13	2096169
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Male connector, M12, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded	YF8U13-050UA1M2A13	2096170

	Brief description	Type	part no.
	Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Male connector, M12, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-020UA1M2A13	2095748
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Male connector, M8, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-020UA1M8U13	2096304
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Male connector, M8, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-050UA1M8U13	2096308
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Male connector, M8, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-020UA1M8U13	2107781
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Male connector, M12, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-050UA1M2A13	2122842
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Male connector, M12, 3-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF8U13-030UA1M2A13	2144589
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-C60UA1XLEAX	2145889
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 3-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YG8U13-030UA1XLEAX	2145891

SICK AT A GLANCE

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