



IMM05-2B5NSVT0S

IMM

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
IMM05-2B5NSVT0S	1103987

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

Illustration may differ



Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M5 x 0.5
Diameter	Ø 5 mm
Sensing range S_n	2.5 mm
Safe sensing range S_a	2.025 mm
Installation type	Quasi-flush
Switching frequency	4,000 Hz
Connection type	Connector M8, 3-pin
Switching output	NPN
Switching output detail	NPN
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 ¹⁾
Special features	Visual adjustment indicator, triple sensing range
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
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¹⁾ Of V_S .

²⁾ With $I_a = 200$ mA.

³⁾ Supply voltage U_B and constant ambient temperature T_a .

Ripple	$\leq 20 \% ^{1)}$
Voltage drop	$\leq 2 \text{ V} ^{2)}$
Time delay before availability	$\leq 30 \text{ ms}$
Hysteresis	$1 \% \dots 20 \%$
Reproducibility	$\leq 2.5 \% ^{3)}$
Temperature drift (of S_r)	$\leq 10 \%$
EMC	EN 60947-5-2
Continuous current I_a	$\leq 100 \text{ mA}$
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	$-10 \text{ }^{\circ}\text{C} \dots +60 \text{ }^{\circ}\text{C}$
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.	$\leq 1.5 \text{ Nm}$
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%

Reduction factors

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	Approx. 0.65
Aluminum (Al)	Approx. 0.38
Copper (Cu)	Approx. 0.33
Brass (Br)	Approx. 0.41

Installation note

Remark	Associated graphic see "Installation"
A	1 mm
B	6 mm
C	5 mm
D	7.5 mm
E	2 mm
F	9 mm

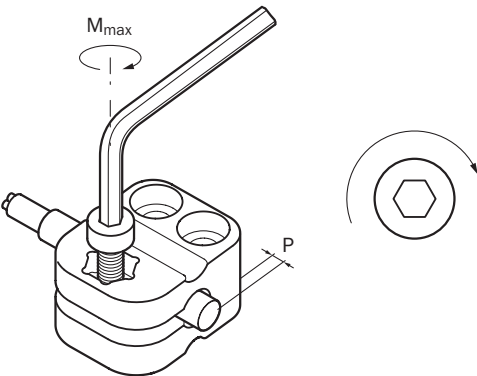
Certificates

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

Classifications

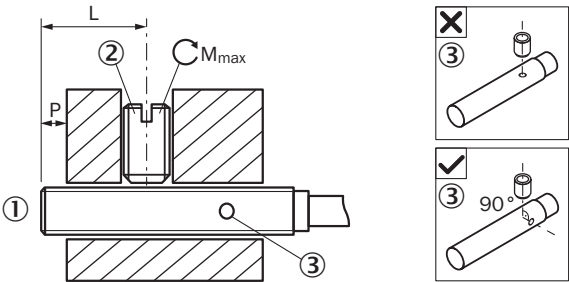
ECLASS 5.0	27270101
ECLASS 5.1.4	27270101
ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101
ECLASS 9.0	27270101
ECLASS 10.0	27270101
ECLASS 11.0	27270101
ECLASS 12.0	27274001
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC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

Installation note Mounting using BEF-KH-M05 bracket



Sensor type	Mounting adapter	Overrun (P)	Max. tightening torque (M_{\max})
IMM05-2B5*****	BEF-KH-M05, part no. 2101066	$\geq 2 \text{ mm}$	$\leq 0.6 \text{ Nm}$

Installation note Fixing with setscrew

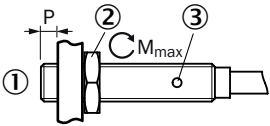


- ① Sensing face
- ② Recommended setscrew: M3, flat point
- ③ Display LED

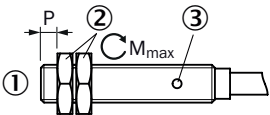
Sensor type	Overrun (P)	Mounting area (L)	Max. tightening torque (M _{max})
IMM05-2B5****K	≥ 2 mm	7.5 mm ... 9 mm	≤ 0.2 Nm
IMM05-2B5****S	≥ 2 mm	7.5 mm ... 19 mm	≤ 0.2 Nm
IMM05-2B5***T0S	≥ 2 mm	7.5 mm ... 18 mm	≤ 0.2 Nm

Installation note Mounting using mounting nuts

Mounting using one mounting nut



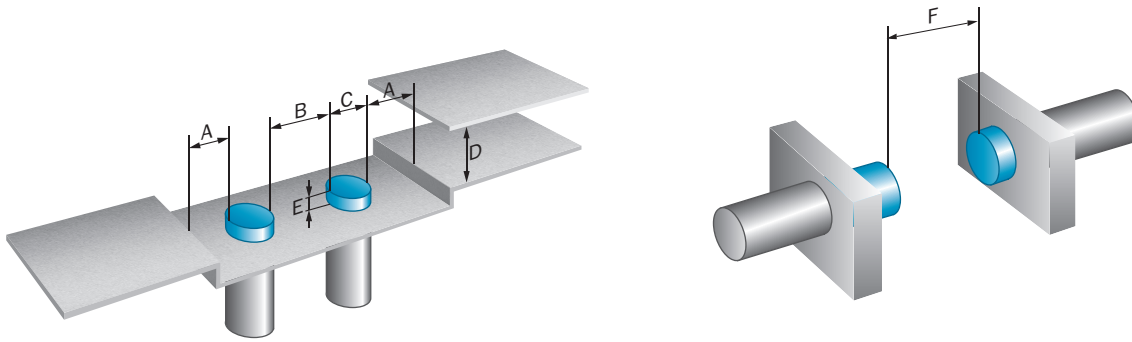
Mounting using two mounting nuts



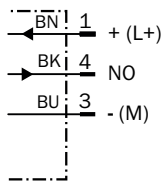
- ① Sensing face
- ② Fastening nut
- ③ Display LED

Sensor type	Overrun (P)	Max. tightening torque (M _{max})
IMM04-1B5*****	≥ 2 mm	≤ 0.8 Nm
IMM05-2B5*****	≥ 2 mm	≤ 1.5 Nm

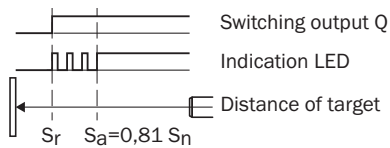
Installation note Quasi-flush installation



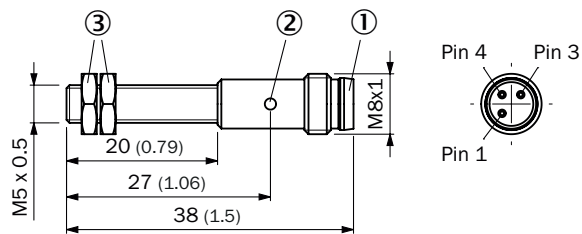
Connection diagram Cd-002



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

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• 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			
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-020UA1XLEAX	2094782
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-050UA1XLEAX	2094788
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-020UA1XLEAX	2094794
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-050UA1XLEAX	2095586
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-020UA1M2A13	2096169
	<ul style="list-style-type: none"> 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.
  	<ul style="list-style-type: none"> Application: Uncontaminated zones, 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-020UA1M2A13	2095748
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-020UA1M8U13	2096304
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-050UA1M8U13	2096308
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-020UA1M8U13	2107781
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-050UA1M2A13	2122842
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF8U13-030UA1M2A13	2144589
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-C60UA1XLEAX	2145889
	<ul style="list-style-type: none"> 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: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG8U13-030UA1XLEAX	2145891

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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