



IM05-0B8NS-ZT1

IMM

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
IM05-OB8NS-ZT1	6020158

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	0.8 mm
Safe sensing range S_a	0.648 mm
Installation type	Flush
Switching frequency	5,000 Hz
Connection type	Connector M8, 3-pin
Switching output	NPN
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 ¹⁾
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⁾
Voltage drop	≤ 2 V ²⁾
Time delay before availability	≤ 10 ms
Hysteresis	1 % ... 10 %
Reproducibility	≤ 1.5 % ³⁾

¹⁾ Of V_S .

²⁾ With $I_a = 200$ mA.

³⁾ Supply voltage U_B and constant ambient temperature T_a .

Temperature drift (of S_r)	≤ 10 %
EMC	EN 60947-5-2 IEC 61000-4-2: (Testlevel 2) IEC 61000-4-4: (Testlevel 2)
Short-circuit 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, POM
Housing length	38 mm
Thread length	22 mm
Tightening torque, max.	≤ 1.5 Nm
UL File No.	NRKH.E191603

¹⁾ Of V_S.

²⁾ With I_a = 200 mA.

³⁾ Supply voltage U_B and constant ambient temperature T_a.

Safety-related parameters

MTTF_D	186 years
DC_{avg}	0%
T_M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.8
Aluminum (Al)	Approx. 0.5
Copper (Cu)	Approx. 0.45
Brass (Br)	Approx. 0.55

Installation note

Remark	Associated graphic see "Installation"
A	0.8 mm
B	0 mm
C	5 mm
D	2.4 mm
E	0 mm
F	7 mm

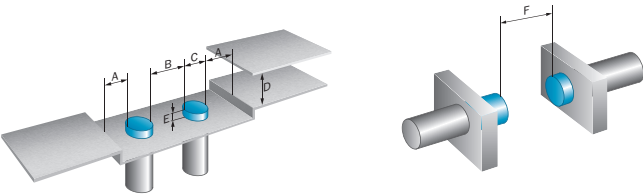
Classifications

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

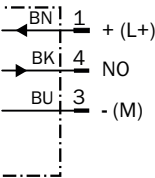
Installation note

Flush installation



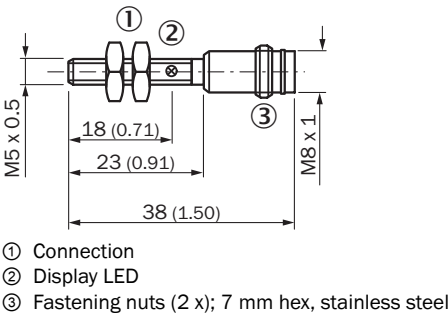
Connection diagram

Cd-002



Dimensional drawing (Dimensions in mm (inch))

Standard-body, flush, connector



Recommended accessories

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

	Brief description	Type	Part no.
Terminal and alignment brackets			
	Plastic (PA6), without mounting hardware	BEF-KH-M05	2101066
Others			
	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, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals	YF8U13-020VA1XLEAX	2095860
	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, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals	YF8U13-050VA1XLEAX	2095884
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals	YF8U13-100VA1XLEAX	2095885
	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, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals	YG8U13-020VA1XLEAX	2096165
	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, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals	YG8U13-050VA1XLEAX	2096166
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals	YG8U13-100VA1XLEAX	2096209
	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: Female connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	DOS-0803-G	7902077
	Connection type head A: Female connector, M8, 3-pin, angled, A-coded Description: Unshielded Connection systems: Solder connection Permitted cross-section: ≤ 0.25 mm²	DOS-0803-W	7902078

	Brief description	Type	Part no.
	• 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, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals	YF8U13-020VA1M2A13	2096605
	• 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, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals	YF8U13-050VA1M2A13	2096606

SICK AT A GLANCE

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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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