



IMP14-03BPOVCOS

IMP

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
IMP14-03BPOVCOS	6050138

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

Illustration may differ



Detailed technical data

Features

Housing	Metric
Thread size	M14 x 1.5
Diameter	Ø 14 mm
Pressure resistance	≤ 500 bar
Sensing range S_n	3 mm
Safe sensing range S_a	2.4 mm
Installation type	Flush
Switching frequency	500 Hz
Connection type	Male connector M12, 4-pin
Switching output	PNP
Switching output detail	PNP
Output function	NC
Electrical wiring	DC 3-wire
Enclosure rating	IP68 ¹⁾
Special features	High pressure resistant
Special applications	Hydraulic application

¹⁾ Sensing face.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 20 % ¹⁾
Voltage drop	≤ 2 V ²⁾

¹⁾ Of V_S .

²⁾ With $I_a = 200$ mA.

³⁾ Typ. 8%.

⁴⁾ $U_b = 20 \dots 30$ VDC.

⁵⁾ $T_a = 23 \text{ }^{\circ}\text{C} \pm 5 \text{ }^{\circ}\text{C}$.

⁶⁾ IEC61000-4-4: 1kV.

⁷⁾ Front.

Time delay before availability	≤ 50 ms
Hysteresis	1 % ... 15 % ³⁾
Reproducibility	≤ 4 % ⁴⁾ ⁵⁾
Temperature drift (of S_r)	15 %
EMC	According to EN 60947-5-2 ⁶⁾
Continuous current I_a	≤ 200 mA
Vacuum resistance	10 ⁻⁸ Torr ⁷⁾
Large sealing ring	11.5 mm x 2.0 mm
Short-circuit protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-25 °C ... +80 °C
Housing material	Stainless steel V4A, DIN 1.4404 / AISI 316L
Sensing face material	Ceramics, ZrO ₂
Sealing ring material	NBR
Housing length	65 mm
Thread length	11 mm
Tightening torque, max.	≤ 70 Nm

¹⁾ Of V_S.

²⁾ With I_a = 200 mA.

³⁾ Typ. 8%.

⁴⁾ U_b = 20 ... 30 VDC.

⁵⁾ T_a = 23 °C ± 5 °C.

⁶⁾ IEC61000-4-4: 1kV.

⁷⁾ Front.

Safety-related parameters

MTTF_D	156 years
DC_{avg}	0%
T_M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	Approx. 0.85
Aluminum (Al)	Approx. 0
Copper (Cu)	Approx. 0
Brass (Br)	Approx. 0.15

Installation note

Remark	Associated graphic see "Installation"
B	12 mm
C	14 mm
D	9 mm
F	20 mm

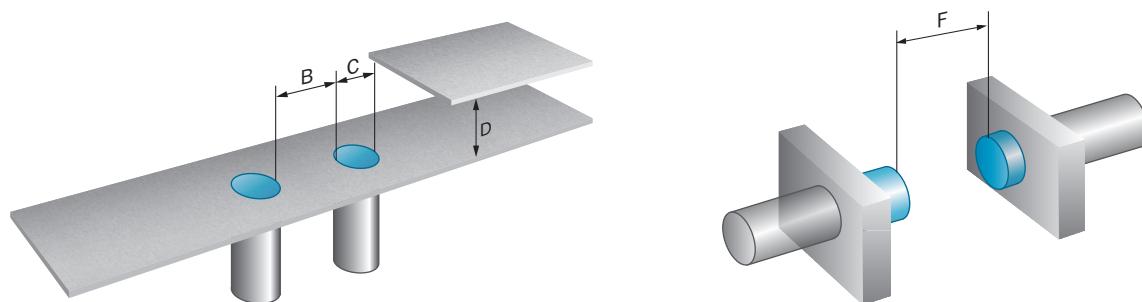
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

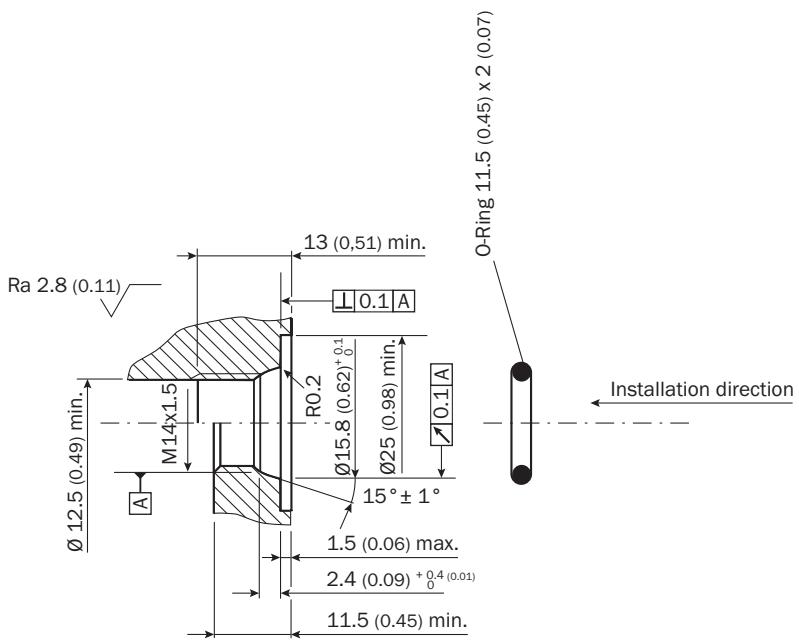
Classifications

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

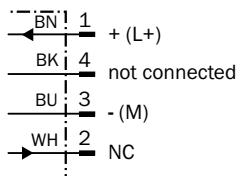
Installation note Flush installation



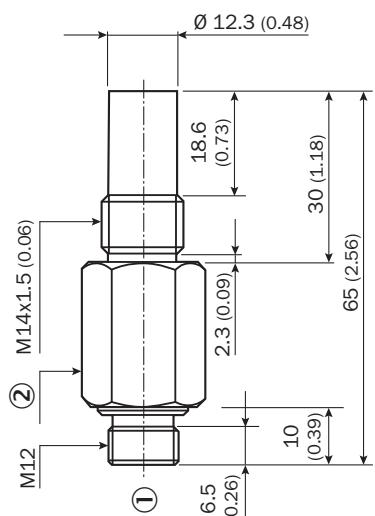
Installation note



Connection diagram Cd-008



Dimensional drawing



Dimensions in mm (inch)

Dimensions in mm (inch)

② width across 19

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Dimensions (W x H x L): 11.5 mm x 2 mm• Suitable for: IMP14	O-ring IMP14	5327495

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-050UB3XLEAX	2095608
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-C60UB3XLEAX	2145654
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-010UB3XLEAX	2145655
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-030UB3XLEAX	2145656
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A14-C60UB3XLEAX	2145657
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A14-010UB3XLEAX	2145658
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YG2A14-C60VB3XLEAX	2145709
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YG2A14-010VB3XLEAX	2145710
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-C60VB3XLEAX	2145707
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-010VB3XLEAX	2145708

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."

WORLDWIDE PRESENCE:

Contacts and other locations www.sick.com