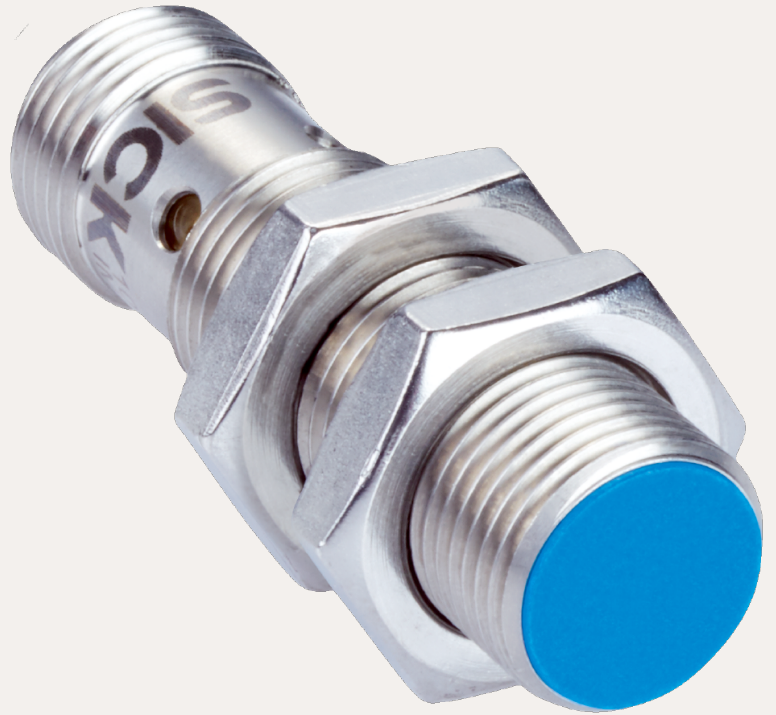




DATA SHEET

IMG12-04BPOZC0K

IMG
Inductive proximity sensors

SICK Sensor Intelligence



Illustration may differ

INDUCTIVE PROXIMITY SENSORS

IMG12-04BPOZC0K

ORDERING INFORMATION

Type	part no.
IMG12-04BPOZC0K	1135531

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



DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Housing	Short-body
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	4 mm
Safe sensing range S_a	3.24 mm
Installation type	Flush
Switching frequency	2,000 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	IP67 ¹⁾ IP68 ¹⁾ IP69K ²⁾
Special features	Resistant against coolant lubricants, Temperature resistance
Special applications	Zones with coolants and lubricants, Mobile machines, Difficult application conditions
Items supplied	Mounting nut, brass, nickel-plated (2x)

¹⁾ According to EN 60529.

²⁾ According to ISO 20653:2013-03.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Ripple	$\leq 10 \%$
Voltage drop	$\leq 2 \text{ V}$ ¹⁾
Time delay before availability	$\leq 100 \text{ ms}$
Hysteresis	3 % ... 20 %
Reproducibility	$\leq 2 \%$ ²⁾ ³⁾
Temperature drift (of S _r)	$\pm 10 \%$
EMC	According to EN 60947-5-2
Environmental test	Quick temperature change EN 60068-2-14, Na: TA = -25 °C, TB = 75 °C, t1 = 40 min, t2 = < 10 s, 300 cycles
Corrosion test	Salt spray test EN 60068-2-52: severity 5, 4 cycles
Continuous current I _a	$\leq 200 \text{ mA}$
No load current	$\leq 10 \text{ mA}$
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	Vibration resistance acc. to EN 60068-2-6 Fc: 60 g peak (10 Hz ... 2,000 Hz) Long-term shock resistance acc. to EN 60068-2-27 Ea: 100 g 2 ms sinusoidal; 500 shocks in each direction of the 3 coordinate axes Broadband noise acc. to EN 60068-2-64: 15 g rms (5 Hz ... 2,000 Hz) / 8 hours in each direction of the 3 coordinate axes
Display	LED yellow Switching status Permanently on: Switching output active
Ambient operating temperature	-40 °C ... +85 °C
Housing material	Nickel-plated brass
Sensing face material	Plastic, LCP
Housing length	45 mm
Thread length	28 mm
Tightening torque, max.	$\leq 12 \text{ Nm}$
Protection class	III
UL File No.	E181493

¹⁾ At I_a max.²⁾ Supply voltage U_s and constant ambient temperature Ta.³⁾ Of Sr.**SAFETY-RELATED PARAMETERS**

MTTF _D	1,820 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. 0.78
Aluminum (Al)	Approx. 0.49
Copper (Cu)	Approx. 0.37
Brass (Br)	Approx. 0.53

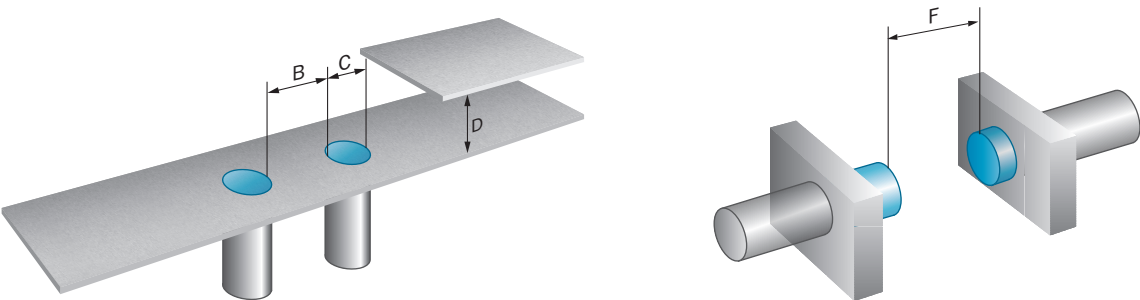
INSTALLATION NOTE

Remark	Associated graphic see "Installation"
B	12 mm
C	12 mm
D	12 mm
F	32 mm

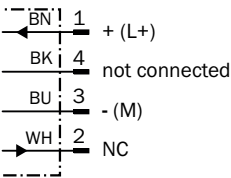
CERTIFICATES

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	✓

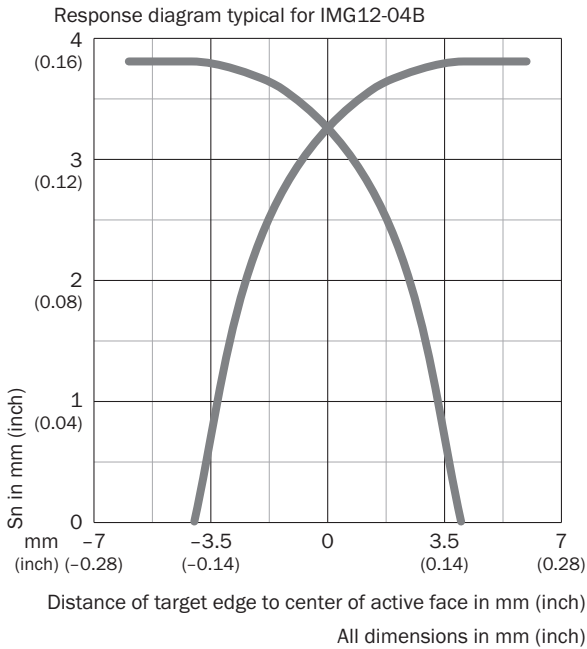
INSTALLATION NOTE FLUSH INSTALLATION



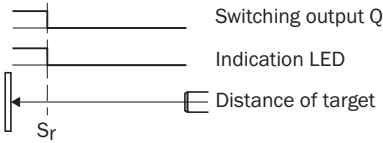
CONNECTION DIAGRAM CD-008



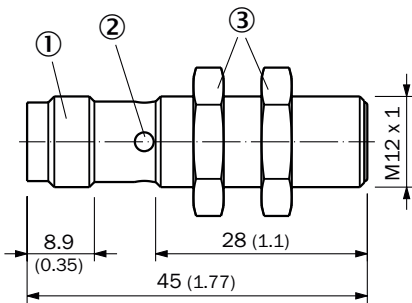
RESPONSE DIAGRAM



FUNCTIONAL PRINCIPLE



DIMENSIONAL DRAWING IMG12, SHORT VARIANT, MALE CONNECTOR, FLUSH



Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Fastening nuts (2x); AF17; nickel-plated brass

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/1135531



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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