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DATA SHEET

IMB18-12NPOVC0S

IMB
Inductive proximity sensors

SICK
Sensor Intelligence

Illustration may differ

INDUCTIVE PROXIMITY SENSORS

IMB18-12NPOVC0S

ORDERING INFORMATION

Type	part no.
IMB18-12NPOVC0S	1072810

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

DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Housing	Standard design
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	12 mm
Safe sensing range S_a	9.72 mm
Installation type	Non-flush
Switching frequency	1,000 Hz
Connection type	Male connector M12, 4-pin [1]
Switching output	PNP
Switching output detail	PNP
Output function	NC
Electrical wiring	DC 3-wire
Enclosure rating	IP68 [2] IP69K [3]
Special features	Resistant against coolant lubricants, Visual adjustment indicator, Temperature resistance
Special applications	Zones with coolants and lubricants, Mobile machines, Difficult application conditions
Items supplied	Mounting nut, V2A stainless steel, with locking teeth (2x)

[1] With gold plated contact pins.

[2] According to EN 60529.

[3] According to ISO 20653:2013-03.

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2 V [1]
Hysteresis	3 % ... 20 %
Reproducibility	≤ 2 % [2] [3]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
No load current	≤ 10 mA
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	100 g / 2 ms / 500 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz / 1 mm; 55 Hz ... 500 Hz / 60 g
Ambient operating temperature	–40 °C ... +100 °C
Housing material	Stainless steel V2A, DIN 1.4305 / AISI 303
Sensing face material	Plastic, LCP
Housing length	65 mm
Thread length	39 mm
Tightening torque, max.	Typ. 60 Nm [4] Typ. 90 Nm [5]
Protection class	III
UL File No.	E181493

[1] At I_a max.

[2] Supply voltage U_B and constant ambient temperature Ta.

[3] Of Sr.

[4] When using the non-toothed side of the nut.

[5] Valid if toothed side of nut is used.

SAFETY-RELATED PARAMETERS

$MTTF_D$	1,971 years
DC_{avg}	0 %

REDUCTION FACTORS

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	Approx. 0.7
Aluminum (Al)	Approx. 0.43
Copper (Cu)	Approx. 0.37
Brass (Br)	Approx. 0.43

INSTALLATION NOTE

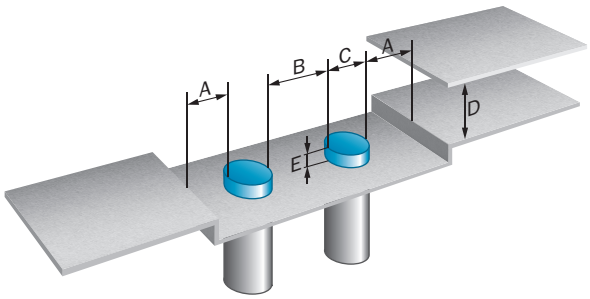
Remark	Associated graphic see "Installation note"
A	18 mm
B	45 mm
C	18 mm
D	36 mm

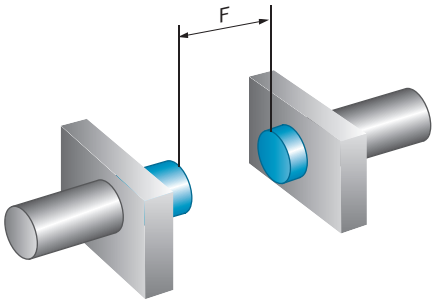
E	12 mm
F	96 mm

CERTIFICATES

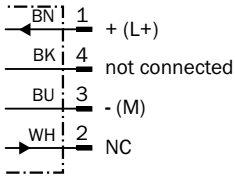
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

INSTALLATION NOTE NON-FLUSH INSTALLATION

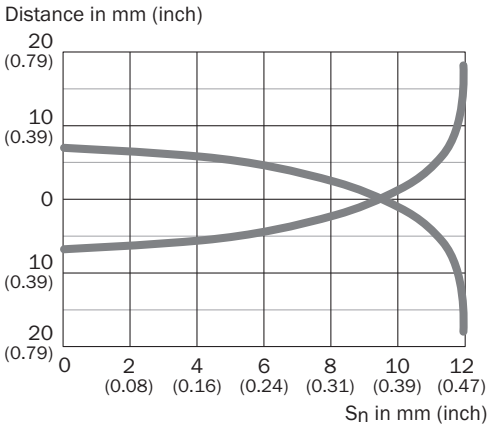




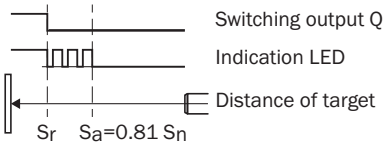
CONNECTION DIAGRAM CD-008



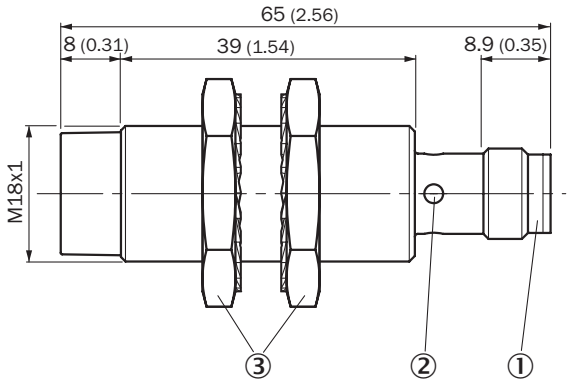
RESPONSE DIAGRAM



FUNCTIONAL PRINCIPLE INSTALLATION AID



DIMENSIONAL DRAWING IMB18 STANDARD, CONNECTOR M12, NON-FLUSH



Dimensions in mm (inch)
① Connection
② Display LED
③ Fastening nuts (2 x); width across 24, stainless steel V2A

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/1072810

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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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