

IMB08-02BPOVQDK

INDUCTIVE PROXIMITY SENSORS



INDUCTIVE PROXIMITY SENSORS



Ordering information

Туре	Part no.
IMB08-02BPOVQDK	1111805

Included in delivery: BEF-MU-MO8N (1)

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





Detailed technical data

Features

Housing	Cylindrical thread design
Housing	Short-body
Thread size	M8 x 1
Diameter	Ø 8 mm
Sensing range S _n	2 mm
Safe sensing range S _a	1.62 mm
Installation type	Flush
Switching frequency	4,000 Hz
Connection type	Cable with connector M12, 3-pin, 600 mm
Switching output	PNP
Output function	NC
Electrical wiring	DC 3-wire
Enclosure rating	IP68 ¹⁾ IP69K ²⁾
Special features	Resistant against coolant lubricants, Visual adjustment indicator
Special applications	Zones with coolants and lubricants, Mobile machines, Difficult application conditions
Items supplied	Mounting nut, V2A stainless steel, with locking teeth (2x)

¹⁾ According to EN 60529.

²⁾ According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	10 V DC 30 V DC
Ripple	≤ 10 %

¹⁾ At I_a max.

 $^{2)}\,\mbox{Supply voltage U}_B$ and constant ambient temperature Ta.

³⁾ Of Sr.

 $^{\rm 4)}$ When using the non-toothed side of the nut.

 $^{5)}\ensuremath{\,\text{Valid}}$ if toothed side of nut is used.

INDUCTIVE PROXIMITY SENSORS

Hysteresis 3%20% Reproducibility 2 % 2 ³ 3 ³ Temperature drift (of S,) ± 10% EMC According to EN 60947-5-2 Continuous current Ia < 200 mA		
ReproducibilityscaleReproducibilityscaleRepreducibilityscaleTemperature drift (of S,)±10%EMCAccording to EN 60947-5-2Continuous current IascaleNo load currentscaleNo load currentScaleNo load current IaScaleNo load current IaScalePure definitionScaleShort-circuit protectionIPower-up pulse protectionIShock and vibration resistanceScaleSonder fragmentationScale scale V2A, DIN 1.4305 / AISI 303Ambient operating temperaturePostci, LCPHousing lengthScale scale V2A, DIN 1.4305 / AISI 303Timead lengthScale scale sc	Voltage drop	$\leq 2 V^{(1)}$
Temperature drift (of S,)± 10 %EMCAccording to EN 60947-5-2Continuous current I_≤ 200 mANo load current≤ 10 mACable materialPURShort-circuit protection✓Reverse polarity protection✓Power-up pulse protection✓Shock and vibration resistance100g / 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz 55 Hz, 1 mm / 55 Hz 500 Hz / 15 gAmbient operating temperature-40 ° C +80 ° CHousing materialStainless steel V2A, DIN 1.4305 / AISI 303Sensing face materialPastic, LCPHousing length28 mmTimead lengthYp, 7 Nm 4 ⁰ Tyn. 14 Nm 5 ⁵ Type Tynese, max.IIIUIIUII	Hysteresis	3 % 20 %
ENCAccording to EN 60947-5-2Continuous current Ia<200 mANo load current Ia<10 mACable materialPURShort-circuit protectionPower-up pulse protectionPower-up pulse protectionShock and vibration resistanceOug f 11 ms/ 1000 cycles; 150 g / 1 Mio cycles; 10 Hz 55 Hz mont / 55 Hz 50 Hz / 50 Hz .	Reproducibility	$\leq 2 \%^{2) 3}$
Continuous current Ia<200 mA	Temperature drift (of S _r)	± 10 %
No load currentS 10 mACable materialPURShort-circuit protection✓Reverse polarity protection✓Power-up pulse protection✓Shock and vibration resistanceN00 g/ 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz 55 Hz, 1 mm / 55 Hz 500 Hz / 15 gAmbient operating temperature-40 °C +80 °CHousing materialPlatic, LCPHousing length22 mmThread length28 mmTyp. 7 Nm ⁴⁰ xp. 14 Nm ⁵)Protection classIII	EMC	According to EN 60947-5-2
Cable materialPURShort-circuit protection-Reverse polarity protection-Power-up pulse protection-Shock and vibration resistance00g / 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz 55 Hz .1 mm / 55 Hz 500 Hz /.Ambient operating temperature-40 ° C +80 ° CHousing materialStainess steel V2A, DIN 1.4305 / AISI 303Bensing face material9 Patici, LCPHousing length2 mmThread length28 mmTightening torque, max.Jip, 7 Nm ⁴⁰ yp. 14 Nm ⁵)Protection classIII	Continuous current I _a	≤ 200 mA
Short-circuit protectionReverse polarity protectionPower-up pulse protectionPower-up pulse protectionShock and vibration resistance00 g/ 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz 55 Hz, 1 mm / 55 Hz 500 Hz / 15 gAmbient operating temperature+0 ° C +80 ° CHousing materialStailess steel V2A, DIN 1.4305 / AISI 303Sensing face materialPlatic, LCPHousing length20 mmThread length20 mmTightening torque, max.Np. 7 Nm ⁴ Ty. 14 Nm ⁵)Protection classIII	No load current	≤ 10 mA
Reverse polarity protectionPower-up pulse protectionShock and vibration resistance00 g/ 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz 55 Hz, 1 mm / 55 Hz 500 Hz / 15 gAmbient operating temperature-40 ° C +80 ° CHousing materialStainless steel V2A, DIN 1.4305 / AISI 303Sensing face materialPlastic, LCPHousing length32 mmTiread lengthStainless face materialTightening torque, max.Typ, 7 Nm ⁴ Typ, 14 Nm ⁵)Protection classIII	Cable material	PUR
Power-up pulse protectionPower-up pulse protectionShock and vibration resistance00 g / 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz 55 Hz, 1 mm / 55 Hz 500 Hz / 15 gAmbient operating temperature-40 °C +80 °CHousing materialStainless steel V2A, DIN 1.4305 / AISI 303Sensing face materialPlastic, LCPHousing length32 mmThread length28 mmTightening torque, max.Yp. 7 Nm ⁴) rp. 14 Nm ⁵)Protection classIII	Short-circuit protection	✓
Shock and vibration resistanceSog shift sog shift s	Reverse polarity protection	✓
Is gIs gAmbient operating temperature-40 °C +80 °CHousing materialStainless steel V2A, DIN 1.4305 / AISI 303Sensing face materialPlastic, LCPHousing length32 mmThread length28 mmTightening torque, max.yp. 7 Nm ⁴) yp. 14 Nm ⁵)Protection classIII	Power-up pulse protection	✓
Housing materialStainless steel V2A, DIN 1.4305 / AISI 303Sensing face materialPlastic, LCPHousing length32 mmThread length28 mmTightening torque, max.Typ. 7 Nm ⁴) ryp. 14 Nm ⁵)Protection classIII	Shock and vibration resistance	
Sensing face materialPlastic, LCPHousing length32 mmThread length28 mmTightening torque, max.yp. 7 Nm ⁴) ryp. 14 Nm ⁵)Protection classIII	Ambient operating temperature	-40 °C +80 °C
Housing length32 mmThread length28 mmTightening torque, max.Typ. 7 Nm ⁴) ryp. 14 Nm ⁵)Protection classIII	Housing material	Stainless steel V2A, DIN 1.4305 / AISI 303
Thread length 28 mm Tightening torque, max. Typ. 7 Nm ⁴) Typ. 14 Nm ⁵) Protection class III	Sensing face material	Plastic, LCP
Tightening torque, max. Typ. 7 Nm ⁴) Typ. 14 Nm ⁵) Protection class III	Housing length	32 mm
Protection class III	Thread length	28 mm
	Tightening torque, max.	
F181493	Protection class	III
	UL File No.	E181493

¹⁾ At I_a max.

 $^{(2)}$ Supply voltage ${\sf U}_{\sf B}$ 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

MTTFD	1,971 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. 0.74
Aluminum (Al)	Approx. 0.43
Copper (Cu)	Approx. 0.33
Brass (Br)	Approx. 0.46

Installation note

Remark	Associated graphic see "Installation"
В	6.5 mm

INDUCTIVE PROXIMITY SENSORS

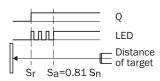
C	8 mm
D	6 mm
F	16 mm

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

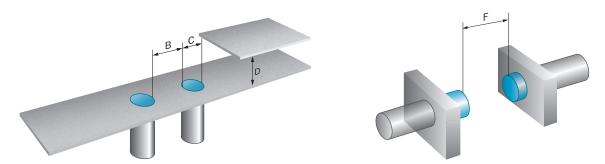
Adjustments

Installation aid



Installation note

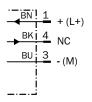
Flush installation



INDUCTIVE PROXIMITY SENSORS

Connection diagram

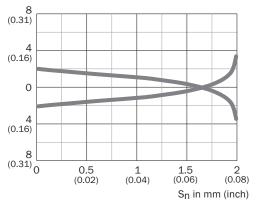
Cd-004



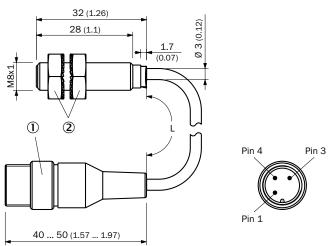
Response diagram

Response diagram

Distance in mm (inch)



Dimensional drawing (Dimensions in mm (inch))



① Connection

② Fastening nuts (2 x); width across 13, stainless steel V2A

INDUCTIVE PROXIMITY SENSORS

Recommended accessories

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

	Brief description	Туре	Part no.
Mounting brackets and plates			
	Mounting plate for M8 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M08	5321722
	Mounting bracket for M8 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M08	5321721

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



Online data sheet

