IMB30-20NPSVC0SX02

IMB

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

IMB30-20NPSVC0SX02 | IMB

INDUCTIVE PROXIMITY SENSORS

Ordering information

Type	Part no.
IMB30-20NPSVC0SX02	1099574

Included in delivery: Cable housing/cover (1), BEF-MU-M30N (1)

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

Illustration may differ

Detailed technical data

Features

Housing	Cylindrical thread design
Housing	Standard design
Thread size	M30 x 1.5
Diameter	Ø 30 mm
Sensing range S_n	20 mm
Safe sensing range S_a	16.2 mm
Installation type	Non-flush
Switching frequency	500 Hz
Connection type	Male connector M12, 4-pin [1]
Switching output	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 [2]
Special features	Resistant against coolant lubricants, Visual adjustment indicator, IO-Link, Temperature resistance
Special applications	Zones with coolants and lubricants, Mobile machines, Difficult application conditions, Explosive areas
Items supplied	Mounting nut, V2A stainless steel, with locking teeth (2x) Cable housing/cover

[1] With gold plated contact pins.

[2] According to EN 60529.

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 [4]
No load current	≤ 10 mA
Short-circuit protection	✓
Reverse polarity 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	–20 °C … +95 °C
Housing material	Stainless steel V2A, DIN 1.4305 / AISI 303
Sensing face material	Plastic, LCP
Housing length	70 mm
Thread length	40 mm
Tightening torque, max.	Typ. 100 Nm [5] Typ. 100 Nm [6]
ATEX marking	II 3G Ex ec IIC T4 Gc X, II 3D Ex tc IIIC T135 °C Dc X
Ex area category	3G, 3D
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] Depend on ambient temperature. For details see operating instructions under „performance data of the sensor".

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

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

Safety-related parameters

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

Communication interface

Communication interface	IO-Link V1.0
Communication Interface detail	COM2 (38,4 kBaud)
Process data length	1 Byte
Process data structure	Bit 0 = Sr reached Bit 1 = Sa reached

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. 0.44
Copper (Cu)	Approx. 0.36
Brass (Br)	Approx. 0.46

Installation note

Remark	Associated graphic see "Installation"
A	20 mm
B	62 mm
C	30 mm
D	60 mm
E	20 mm
F	160 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
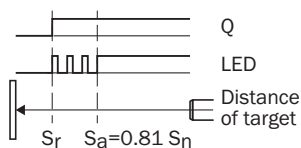
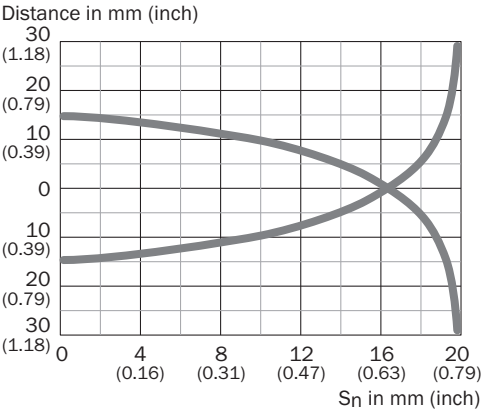## Installation note
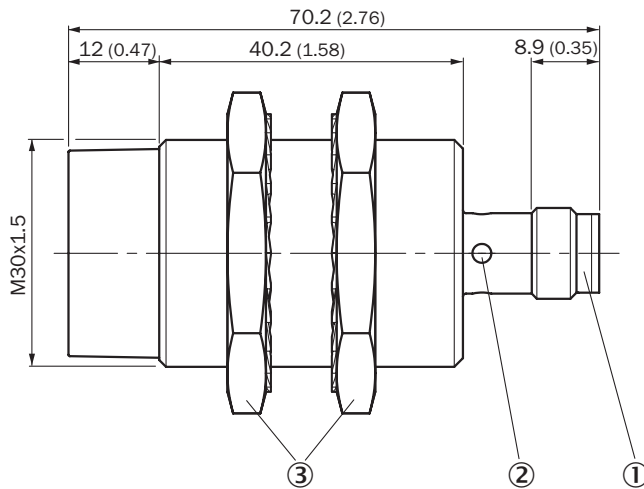
Non-flush installation

Connection diagram

Cd-456

BN	1	+ (L+)
BK	4	NO/C
	2	not connected
BU	3	- (M)
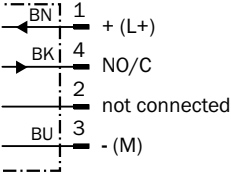
Response diagram

Response diagram

Distance in mm (inch)

S_n in mm (inch)

Dimensional drawing (Dimensions in mm (inch))

IMB30 Standard, connector M12, non-flush

① Connection
② Display LED
③ Fastening nuts (2 x); width across 36, stainless steel V2A

Recommended accessories

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

	Brief description	Type	Part no.
Device protection (mechanical)			
	Screw-on protective cap for metric sensors. Protects the sensor from damage caused by impacts on the front., plastic	CAP-M30-DN	2083542
Mounting brackets and plates			
		BEF-WG-M30	5321871
		BEF-WN-M30	5308445
Others			
		DOL-1204-G02MRN	6058291
		DOL-1204-G05MRN	6058476
		DOL-1204-W02MRN	6058474
		DOL-1204-W05MRN	6058477

	Brief description		Type	Part no.
			DOL-1204-L02MRN	6058482
			DOL-1204-L05MRN	6058483
			DSL-1204-B02MRN	6058502
			DSL-1204-B05MRN	6058503
			DSL-1204-G02MRN	6058499
			DSL-1204-G05MRN	6058500
			YF2A14-050UB3M2A14	2096001
			YF2A14-020UB3XLEAX	2095607
			YF2A14-050UB3XLEAX	2095608
			YG2A14-050UB3XLEAX	2095767

Recommended services

Additional services ➜ www.sick.com/IMB

	Type	Part no.
Function Block Factory		
• **Description:** The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&R. More information on the FBF can be found here. • **Note:** You can configure your function block at Function Block Factory. As a login please use your SICK ID.	Function Block Factory	On request

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."

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