



# IMB18-08BDSVU2K

IMB

INDUCTIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.

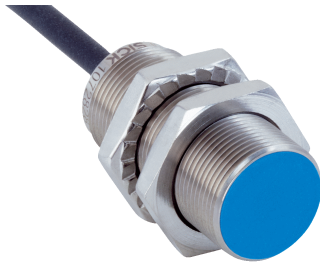
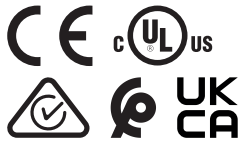


Illustration may differ



## Ordering information

Type	part no.
IMB18-08BDSVU2K	1074380

**Included in delivery:** BEF-MU-M18N (1)

Other models and accessories → [www.sick.com/IMB](http://www.sick.com/IMB)

## Detailed technical data

### Features

<b>Housing</b>	Metric
<b>Housing</b>	Short-body
<b>Thread size</b>	M18 x 1
<b>Diameter</b>	Ø 18 mm
<b>Sensing range <math>S_n</math></b>	8 mm
<b>Safe sensing range <math>S_a</math></b>	6.48 mm
<b>Installation type</b>	Quasi-flush <sup>1)</sup>
<b>Switching frequency</b>	1,000 Hz
<b>Connection type</b>	Cable, 2-wire, 2 m
<b>Output function</b>	NO
<b>Electrical wiring</b>	DC 2-wire
<b>Enclosure rating</b>	IP68 <sup>2)</sup> IP69K <sup>3)</sup>
<b>Special features</b>	Resistant against coolant lubricants, Visual adjustment indicator, Temperature resistance
<b>Special applications</b>	Zones with coolants and lubricants, Mobile machines, Difficult application conditions
<b>Items supplied</b>	Mounting nut, V2A stainless steel, with locking teeth (2x)

<sup>1)</sup> When installed in conductive materials, the sensors must protrude by distance E (E = 2 mm).

<sup>2)</sup> According to EN 60529.

<sup>3)</sup> According to ISO 20653:2013-03.

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
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<sup>1)</sup> At  $I_a = 30$  mA.

<sup>2)</sup> At  $I_a$  max.

<sup>3)</sup> Supply voltage  $U_B$  and constant ambient temperature  $T_a$ .

<sup>4)</sup> Of  $S_r$ .

<sup>5)</sup> When using the non-toothed side of the nut.

<sup>6)</sup> Valid if toothed side of nut is used.

<b>Ripple</b>	≤ 10 %
<b>Voltage drop</b>	≤ 4 V <sup>1)</sup> ≤ 4.5 V <sup>2)</sup>
<b>Time delay before availability</b>	≤ 100 ms
<b>Hysteresis</b>	3 % ... 20 %
<b>Reproducibility</b>	≤ 2 % <sup>3)</sup> <sup>4)</sup>
<b>Temperature drift (of S<sub>r</sub>)</b>	± 10 %
<b>EMC</b>	According to EN 60947-5-2
<b>Continuous current I<sub>a</sub></b>	≤ 100 mA
<b>Off-state current</b>	Typ. 0.8 mA (≤ 1.2 mA at U <sub>b</sub> max and 100 ° C)
<b>Minimum load current</b>	≥ 3 mA
<b>Cable material</b>	PUR
<b>Conductor size</b>	0.34 mm <sup>2</sup>
<b>Cable diameter</b>	Ø 4.5 mm
<b>Short-circuit protection</b>	✓
<b>Power-up pulse</b>	≤ 5 ms
<b>Shock and vibration resistance</b>	100 g / 2 ms / 500 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz / 1 mm; 55 Hz ... 500 Hz / 60 g
<b>Ambient operating temperature</b>	-40 °C ... +100 °C
<b>Housing material</b>	Stainless steel V2A, DIN 1.4305 / AISI 303
<b>Sensing face material</b>	Plastic, LCP
<b>Housing length</b>	40 mm
<b>Thread length</b>	35 mm
<b>Tightening torque, max.</b>	Typ. 60 Nm <sup>5)</sup> Typ. 90 Nm <sup>6)</sup>
<b>Protection class</b>	III
<b>UL File No.</b>	E181493

<sup>1)</sup> At I<sub>a</sub> = 30 mA.

<sup>2)</sup> At I<sub>a</sub> max.

<sup>3)</sup> Supply voltage U<sub>B</sub> and constant ambient temperature T<sub>a</sub>.

<sup>4)</sup> Of S<sub>r</sub>.

<sup>5)</sup> When using the non-toothed side of the nut.

<sup>6)</sup> Valid if toothed side of nut is used.

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	1,287 years
<b>DC<sub>avg</sub></b>	0 %

## Reduction factors

<b>Note</b>	The values are reference values which may vary
<b>St37 steel (Fe)</b>	1
<b>Stainless steel (V2A, 304)</b>	Approx. 0.55
<b>Aluminum (Al)</b>	Approx. 0.24

<b>Copper (Cu)</b>	Approx. 0.19
<b>Brass (Br)</b>	Approx. 0.24

#### Installation note

<b>Remark</b>	Associated graphic see "Installation"
<b>A</b>	9 mm
<b>B</b>	18 mm
<b>C</b>	18 mm
<b>D</b>	24 mm
<b>E</b>	2 mm
<b>F</b>	64 mm

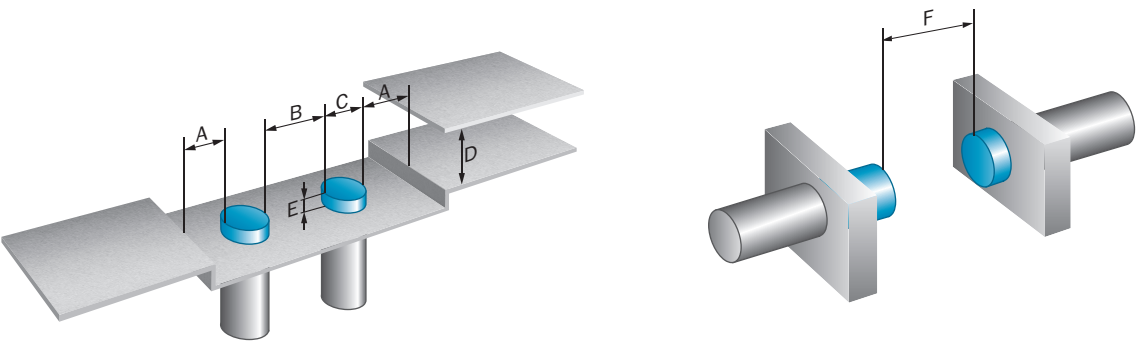
#### Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓

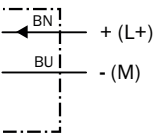
#### Classifications

<b>ECLASS 5.0</b>	27270101
<b>ECLASS 5.1.4</b>	27270101
<b>ECLASS 6.0</b>	27270101
<b>ECLASS 6.2</b>	27270101
<b>ECLASS 7.0</b>	27270101
<b>ECLASS 8.0</b>	27270101
<b>ECLASS 8.1</b>	27270101
<b>ECLASS 9.0</b>	27270101
<b>ECLASS 10.0</b>	27270101
<b>ECLASS 11.0</b>	27270101
<b>ECLASS 12.0</b>	27274001
<b>ETIM 5.0</b>	EC002714
<b>ETIM 6.0</b>	EC002714
<b>ETIM 7.0</b>	EC002714
<b>ETIM 8.0</b>	EC002714
<b>UNSPSC 16.0901</b>	39122230

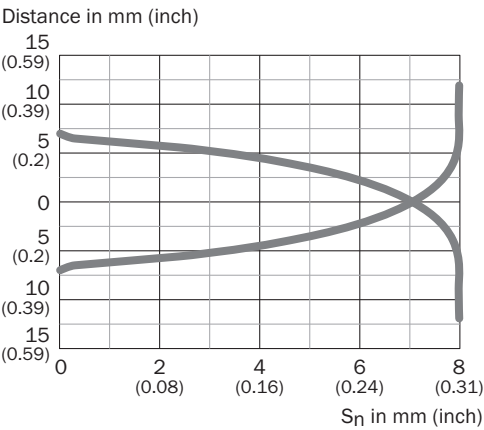
Installation note Quasi-flush installation



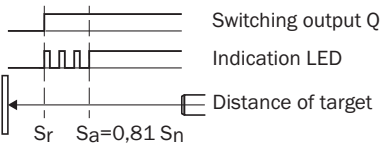
Connection diagram Cd-012



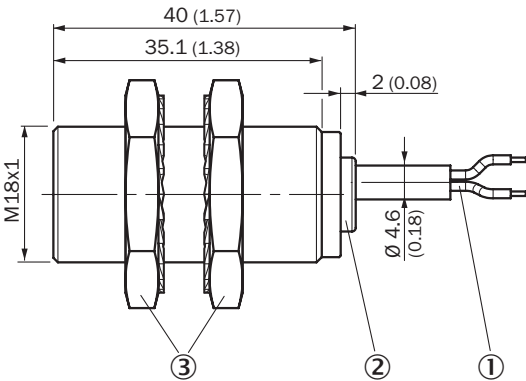
Response diagram



Functional principle Installation aid



Dimensional drawing IMB18 Short-body housing, cable, flush







Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Fastening nuts (2 x); width across 24, stainless steel V2A

Recommended accessories

Other models and accessories → [www.sick.com/IMB](http://www.sick.com/IMB)

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"><li><b>Description:</b> Mounting plate for M18 sensors</li><li><b>Material:</b> Stainless steel</li><li><b>Details:</b> Stainless steel</li><li><b>Items supplied:</b> Without mounting hardware</li></ul>	BEF-WG-M18N	5320948
	<ul style="list-style-type: none"><li><b>Description:</b> Mounting bracket for M18 sensors</li><li><b>Material:</b> Steel</li><li><b>Details:</b> Steel, zinc coated</li><li><b>Items supplied:</b> Without mounting hardware</li><li><b>Suitable for:</b> GR18, V180-2, V18, W15, Z1, Z2</li></ul>	BEF-WN-M18	5308446
	<ul style="list-style-type: none"><li><b>Description:</b> Mounting bracket for M18 sensors</li><li><b>Material:</b> Stainless steel</li><li><b>Details:</b> Stainless steel</li><li><b>Items supplied:</b> Without mounting hardware</li></ul>	BEF-WN-M18N	5320947
	<ul style="list-style-type: none"><li><b>Description:</b> Plate N06N for universal clamp bracket, M18</li><li><b>Material:</b> Stainless steel, stainless steel</li><li><b>Details:</b> Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)</li><li><b>Items supplied:</b> Universal clamp (5322627), mounting hardware</li><li><b>Usable for:</b> MH15, MH15V, V180-2, V18V, W15, GR18, V18, V18 Laser, V12-2, SimpleSense, SureSense, M18 round sensors</li></ul>	BEF-KHS-N06N	2051622

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm²</li> <li>• <b>Application:</b> Hygienic and washdown zones</li> </ul>	DOS-1204-GN	6028357
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm²</li> <li>• <b>Application:</b> Hygienic and washdown zones</li> </ul>	DOS-1204-WN	6028358
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm²</li> <li>• <b>Application:</b> Hygienic and washdown zones</li> </ul>	STE-1204-GN	6028359

## 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](http://www.sick.com)