

## **IMB**

THE TOUGHEST DECISION YOU CAN MAKE

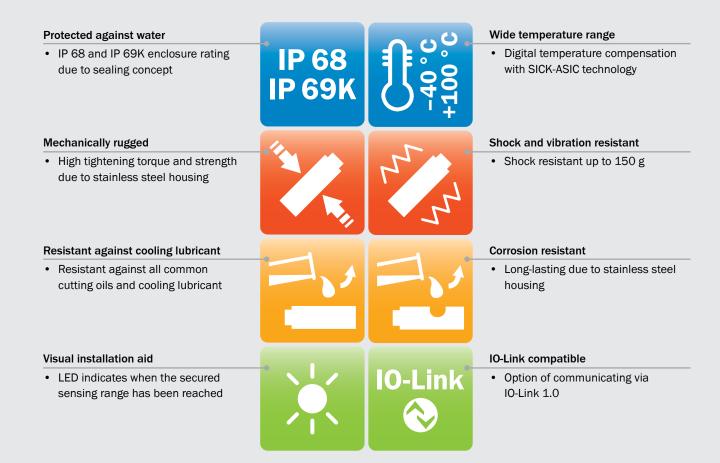
**Inductive Proximity Sensors** 





Inductive sensors have to be tough enough to cope with anything that's thrown at them. So it's about time that one took the lead and showed the others how it's done.

The IMB from SICK is both more resilient on the outside and more intelligent on the inside, boasting levels of chemical and mechanical resistance unmatched by any other device of the same construction, allowing it to withstand lubricants, oils, and coolants, as well as extreme temperatures and weather conditions. The IMB effortlessly defies the preconception that tough guys aren't very intelligent, with its ASIC technology and the option of communication via IO-Link: Making its switching as reliable as its exterior is rugged. It doesn't matter how extreme the conditions are at your installation location – from now on the focus is on the survival of the smartest rather than the fittest. We think that's intelligent.



## **WEAR-RESISTANT**

## **MACHINE TOOLING**

The IMB is setting a new standard for inductive proximity sensors in the machine building industry.



#### Typical applications

- · CNC machining center
- Tool changer
- · Workpiece handling

#### **Advantages**

- Optimal resistance against oils and cooling lubricant
- Extreme mechanical ruggedness
- Quick and easy mounting due to visual adjustment indicator
- High levels of flexibility and numerous communication options due to IO-Link















## HARSH ENVIRONMENT APPLICATIONS

When outdoors or anywhere, in which difficult application conditions prevail, the IMB utilizes its features in a particularly impressive way, its sensor covering a variety of applications.









#### Typical applications

- · Container spreaders
- Wind power plants
- · Car wash plants
- · Outdoor gates and barriers

#### **Advantages**

- Protected against water
- · Immune to temperature fluctuations
- Extreme mechanical ruggedness
- Shock and vibration resistant
- Corrosion resistant















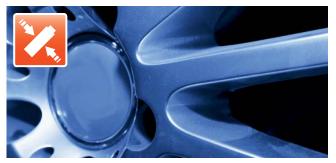


## **TOUGH AND RELIABLE**

Some situations demand significant reliability and toughness. The versatility of the inductive proximity sensor IMB is up to the challenge. Equipped with features tough enough for anything the market can throw at it, it's able to deal with any situation – regardless of the challenges presented by the site of operation. In the end, opting for the IMB is a simple decision.



Water – the source of all life. But not all of its aspects are positive: Too much can also be harmful. Being immersed in it for extended periods or being cleaned with high-pressure washers can shorten the life of many sensors. Not the case for the IMB. Frequent contact with water is unable to harm it, regardless of whether it is being immersed or sprayed with highly pressurized jets.



The wheel screws on cars are often tightened at 100 Nm – just to make sure. This also applies to the IMB, as it is equipped with extra high tightening torque values up to 100 Nm.



Novosibirsk in winter: -40 °C. While others may freeze, the IMB carries on its work unaffected.

Death Valley: Scorching sun and surface temperatures over +80 °C. Even in conditions such as these, the IMB doesn't show any signs of weakness. Even temperatures that can evaporate water are no sweat for the IMB.



During reentry into orbit, the Apollo capsule experienced approximately 6.4 G. 100 G is the maximum value that human beings can survive when it comes to accidents or severe injuries. And even machines have their limits. These limits, however, are significantly higher with the IMB: It can effortlessly withstand loads of up to 150 G.



What does the IMB have to do with pickled olives? At first glance, nothing. But unlike cooking oils, cutting oils and cooling lubricant are extremely aggressive towards system components and often cause sensor malfunctions. The IMB, on the other hand, is designed for frequent contact with these substances – therefore remaining as fresh as olives in oil when in contact with cooling lubricant.



The ravages of time gnaw away at almost everything, leaving noticeable impacts behind. Perhaps most noticeably of all when corrosion attacks surfaces in the form of rust. Due to its stainless steel housing and laser engraving, the IMB does not leave any surface vulnerable to attack, continuing to gleam long after others have started to rust.

## SICK - WE HAVE UNDERSTOOD

In addition to their high performance, the inductive sensors by SICK are simply perfect all-rounders. Global availability, optimum delivery performance and a large portfolio characterize the inductive sensors – and make SICK the right partner.

If the right sensor is not available despite the large product range, customizations provide an even higher degree of flexibility. Our aim is give you the right sensor for your application – at the right time.

Even when it is a tricky task. Thanks to a global support network in over 88 countries, SICK can always work with you to find a solution.





As a major player in automation technology, partnership with SICK offers a variety of benefits. We are committed to driving innovation in the industry, even in areas neglected by others – and we want to do this on a global scale in all sectors. Our global network of production plants

with unified quality standards guarantees a safe and reliable supply. Our elaborate logistics concept ensures rapid availability on site, regardless of which of our over 40,000 products you require. The individual needs of our customers are paramount to SICK.

Our local sales department will advise and support you with your automation projects. Together with our regional development and competence centers, we will always create a solution which adds value for our customers.

#### The IMB is available with the following sensing ranges:

Product	Sensing range (mm)	Page
M08 flush	2 mm	6
M08 non-flush	4 mm	6
M12 flush	4 mm	14
M12 non-flush	8 mm	14
M18 flush	8 mm	22
M18 non-flush	12 mm	22
M30 flush	15 mm	30
M30 non-flush	20 mm	30

# THE RUGGED STANDARD FOR USE IN HARSH ENVIRONMENTS



### **Product description**

The inductive IMB proximity sensor is a byword for reliability in harsh working conditions, whether it is in contact with cooling lubricants or being used outdoors. With its extended sensing ranges, made highly precise thanks to the use of SICK ASIC technology, the IMB ensures reliable, stable processes. What's more, its wide-ranging specification limits allow the IMB to be used in applications where specialist devices were once the only solution – a huge benefit when it

comes to product selection and ware-housing. The visual adjustment indicator and self-locking nuts save time during commissioning and help cut down on errors. Communication via IO-Link is also possible, creating more flexibility and adding more functions for automation applications. With an extensive standard product portfolio available, even special devices can be put into action quickly and easily.

## At a glance

- Type M08
- Extended sensing ranges: 2 to 4 mm
- Electrical wiring: DC 2/3/4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C to 100 °C

## Rugged stainless steel housing, sensing face made of plastic (LCP)

- Visual installation aid, IO-Link-compatible
- Resistant to oils and cooling lubricants; suitable for use outdoors

#### Your benefits

- Straightforward product selection as fewer sensor variants are required

   one sensor suits a whole range of applications
- Stable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life, even in harsh working conditions
- Quick and easy installation thanks to visual installation aid and self-locking nuts
- High degree of flexibility and communication options thanks to IO-Link
- Easy to implement customer-specific variants within the standard product portfolio



## Additional information

Detailed technical data
Ordering information 8
Dimensional drawings
Connection diagram
Installation note
Installation aid 12
Response curve
Accessories



For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more



## Detailed technical data

## **Features**

	DC 2-wire	DC 3-wire	DC 4-wire			
Housing	Cylindrical					
Thread size	M8 x 1					
Sensing range S <sub>n</sub>						
Flush	2 mm					
Non-flush	4 mm					
Assured sensing range S <sub>a</sub>						
Flush	1.62 mm					
Non-flush	3.24 mm					
Installation type	Flush / non-flush (depending on type)					
Switching frequency	4,000 Hz					
Output type	- NPN / PNP (depending on type)					
Output function	NO	NC / NO (depending on type)	Complementary			
Electrical wiring	DC 2-wire	DC 3-wire	DC 4-wire			
Enclosure rating	IP 68 <sup>1)</sup> IP 69K <sup>2)</sup>					
Special features	Resistant against coolant lubricants, visual installation aid	Resistant against coolant lubricants, visual installation aid Capable of communication via IO-Link 1.0 (depending on type)	Resistant against coolant lubricants Capable of communication via IO-Link 1.0 (depending on type)			

 $<sup>^{\</sup>mbox{\tiny 1)}}$  According to EN 60529.

## Mechanics/electronics

	DC 2-wire	DC 3-wire	DC 4-wire		
Supply voltage	10 V DC 30 V DC				
Ripple	≤ 10 %				
Voltage drop	$\leq$ 4 V $^{(1)}$ $\leq$ 2 V $^{(2)}$				
Current consumption	-	≤ 10 mA <sup>3)</sup>			
Time delay before availability	≤ 100 ms				
Hysteresis	3 % 20 %				
Repeatability 4) 5)	≤ 2 %				
Temperature drift (of S <sub>r</sub> )	± 10 %				
EMC	According to EN 60947-5-2				
Continuous current I <sub>a</sub>	≤ 100 mA	≤ 200 mA			
Off-state current	Typ. 0.8 mA ( $\leq$ 1.2 mA at Ub max and 100 ° C)	-			
Load resistance, min.	≥ 3 mA	-			

 $<sup>^{1)}</sup>$  At  $I_a = 30$  mA.

 $<sup>^{\</sup>scriptscriptstyle 2)}$  According to ISO 20653:2013-03.

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

<sup>3)</sup> Without load.

<sup>4)</sup> Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>6)</sup> With gold plated contact pins.

<sup>7)</sup> Valid if toothed side of nut is used.

	DC 2-wire	DC 3-wire	DC 4-wire			
Connection type	Cable, 2 m, PUR Male connector, M8 <sup>6)</sup> (depending on type)	Cable, 2 m, PUR Male connector, M8 <sup>6)</sup> Male connector, M12 <sup>6)</sup> (depending on type)	Male connector, M12 <sup>6)</sup>			
Short-circuit protection	<b>✓</b>					
Reverse polarity protection	<b>✓</b>					
Power-up pulse protection	-	✓				
Power-up pulse	≤ 5 ms	-				
Shock and vibration resistance	100 g / 11 ms / 1000 cycles; : 15 g	150 g / 1 Mio cycles; 10 Hz 5	5 Hz, 1 mm / 55 z 500 Hz /			
Ambient operating temperature	-40 °C +100 °C					
Housing material	V2A (1.4305)					
Sensing face material	Plastic (LCP)					
Tightening torque, max. 7)	Typ. 14 Nm					

<sup>&</sup>lt;sup>1)</sup> At  $I_a = 30 \text{ mA}$ .

#### **Reduction factors**

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	
Flush	Approx. 0.74
Non-flush	Approx. 0.69
Aluminum (AI)	
Flush	Approx. 0.43
Non-flush	Approx. 0.37
Copper (Cu)	
Flush	Approx. 0.33
Non-flush	Approx. 0.28
Brass (Br)	
Flush	Approx. 0.46
Non-flush	Approx. 0.4

## Ordering information

Other models → www.mysick.com/en/IMB08

## DC 2-wire

Installation type	Sensing range S <sub>n</sub>	Housing	Connection	Output function	Connection diagram	Туре	Part no.
	Charles In a divi	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB08-02BDSVU2K	1075585	
Eluah	2 mm	Short-body	Male connector, M8, 3-pin	NO	Cd-246	IMB08-02BDSVT0K	1075583
Flush 2 mm	2 111111	Ctandard	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB08-02BDSVU2S	1074354
		Standard	Male connector, M8, 3-pin	NO	Cd-246	IMB08-02BDSVT0S	1074348

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

<sup>3)</sup> Without load.

<sup>4)</sup> Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>&</sup>lt;sup>6)</sup> With gold plated contact pins.

<sup>7)</sup> Valid if toothed side of nut is used.

Installation type	Sensing range S <sub>n</sub>	Housing	Connection	Output function	Connection diagram	Туре	Part no.
		Short-body	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB08-04NDSVU2K	1075586
Non fluch	4		Male connector, M8, 3-pin	NO	Cd-246	IMB08-04NDSVT0K	1075584
Non-flush 4 mm	4 mm	Ctondond	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB08-04NDSVU2S	1074358
		Standard	Male connector, M8, 3-pin	NO	Cd-246	IMB08-04NDSVTOS	1076276

## DC 3-wire

Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connection	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.
					NC	-	Cd-003	IMB08-02BN0VU2K	1072700
			Cable, 3-wire, 2 m, PUR	NPN	NO	-	Cd-001	IMB08-02BNSVU2K	1072699
				2112	NC	-	Cd-003	IMB08-02BP0VU2K	1072698
		01 11 1		PNP	NO	~	Cd-001	IMB08-02BPSVU2K	1072697
		Short-body		NIDAL	NC	-	Cd-004	IMB08-02BN0VT0K	1072693
			Male connector,	NPN	NO	-	Cd-002	IMB08-02BNSVT0K	1072762
			M8, 3-pin	DND	NC	-	Cd-004	IMB08-02BP0VT0K	1072692
				PNP	NO	~	Cd-002	IMB08-02BPSVT0K	1072691
				NIDNI	NC	-	Cd-003	IMB08-02BN0VU2S	1072686
Fluck	2		Cable, 3-wire,	NPN	NO	-	Cd-001	IMB08-02BNSVU2S	1072685
Flush	2 mm		2 m, PUR	PNP	NC	-	Cd-003	IMB08-02BP0VU2S	1072684
				PINP	NO	•	Cd-001	IMB08-02BPSVU2S	1072683
				NPN	NC	-	Cd-008	IMB08-02BN0VC0S	1072676
		Standard	Male connector, M12, 4-pin	INPIN	NO	-	Cd-007	IMB08-02BNSVC0S	1072675
				PNP	NC	-	Cd-008	IMB08-02BP0VC0S	1072674
				FINE	NO	~	Cd-007	IMB08-02BPSVC0S	1072673
			Male connector,	NPN	NC	-	Cd-004	IMB08-02BNOVT0S	1072591
				INFIN	NO	-	Cd-002	IMB08-02BNSVT0S	1072590
			M8, 3-pin	PNP	NC	-	Cd-004	IMB08-02BP0VT0S	1072589
				FINE	NO	<b>v</b>	Cd-002	IMB08-02BPSVT0S	1070168
				NPN	NC	-	Cd-003	IMB08-04NNOVU2K	1072703
			Cable, 3-wire,	INFIN	NO	-	Cd-001	IMB08-04NNSVU2K	1072702
			2 m, PUR	PNP	NC	-	Cd-003	IMB08-04NP0VU2K	1072454
		Short-body		FINE	NO	<b>~</b>	Cd-001	IMB08-04NPSVU2K	1072701
		Short-body		NPN	NC	-	Cd-004	IMB08-04NNOVTOK	1072696
			Male connector,	INIIN	NO	-	Cd-002	IMB08-04NNSVT0K	1070169
			M8, 3-pin	PNP	NC	-	Cd-004	IMB08-04NPOVTOK	1072695
Non-flush	4 mm			1 141	NO	•	Cd-002	IMB08-04NPSVT0K	1072694
Non-nusn	4 111111			NPN	NC	-	Cd-003	IMB08-04NNOVU2S	1072690
			Cable, 3-wire,	INFIN	NO	-	Cd-001	IMB08-04NNSVU2S	1072689
			2 m, PUR	PNP	NC	-	Cd-003	IMB08-04NP0VU2S	1072688
		Standard		1 145	NO	<b>✓</b>	Cd-001	IMB08-04NPSVU2S	1072687
		Stanuard		NDN	NC	-	Cd-008	IMB08-04NNOVCOS	1072682
			Male connector, M12, 4-pin	NPN	NO	-	Cd-007	IMB08-04NNSVC0S	1072681
				PNP	NC	-	Cd-008	IMB08-04NPOVCOS	1072678
					NO	~	Cd-007	IMB08-04NPSVC0S	1070170

Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connection	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.
Non-flush 4 mm			NPN	NC	-	Cd-004	IMB08-04NNOVTOS	1072671	
	4		Male connector,	NPN	NO	-	Cd-002	IMB08-04NNSVT0S	1072594
	Standard	M8, 3-pin	PNP	NC	-	Cd-004	IMB08-04NPOVT0S	1072593	
				NO	~	Cd-002	IMB08-04NPSVT0S	1072592	

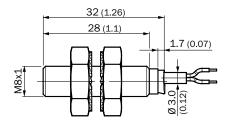
#### DC 4-wire

#### • Housing: standard

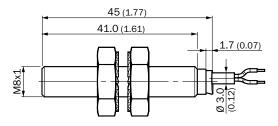
Installation type	Sensing range S <sub>n</sub>	Connection	Output type	Output function	IO-Link	Connection diagram	Туре	Part no.
Flore	0	Male con-	NPN	Complementary	-	Cd-006	IMB08-02BNPVC0S	1074352
Flush 2 mm	nector, M12, 4-pin	PNP	Complementary	<b>~</b>	Cd-006	IMB08-02BPPVC0S	1074349	
Non-flush 4 mm nector	Male con-	NPN	Complementary	-	Cd-006	IMB08-04NNPVC0S	1074353	
	nector, M12, 4-pin	PNP	Complementary	<b>✓</b>	Cd-006	IMB08-04NPPVC0S	1074350	

## Dimensional drawings (Dimensions in mm (inch))

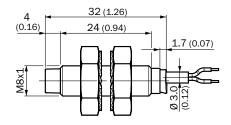
IMB08 Short-body housing, cable, flush



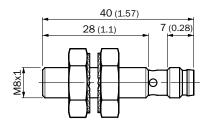
#### IMB08 Standard, cable, flush



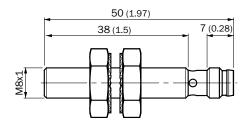
IMB08 Short-body housing, cable, non-flush



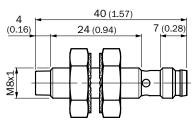
#### IMB08 Short-body housing, connector M8, flush



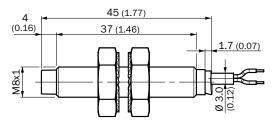
IMB08 Standard, connector, M8, flush



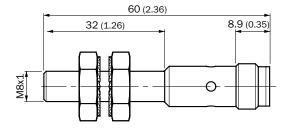
## IMB08 Short-body housing, connector M8, non-flush



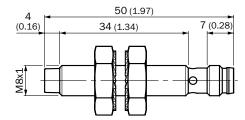
#### IMB08 Standard, cable, non-flush



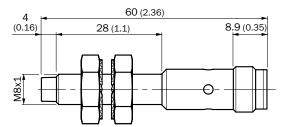
#### IMB08 Standard, connector, M12, flush



#### IMB08 Standard, connector M8, non-flush

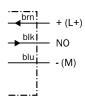


#### IMB08 Standard, connector M12, non-flush



## Connection diagram

Cd-001



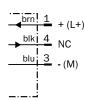
Cd-002



Cd-003



Cd-004

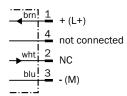


Cd-006



Cd-007

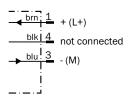
Cd-008



Cd-012

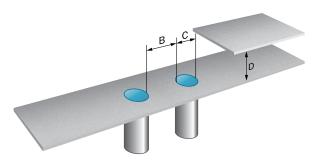


#### Cd-246

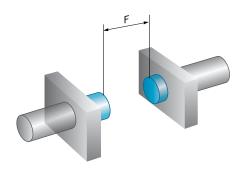


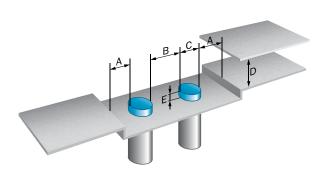
## Installation note

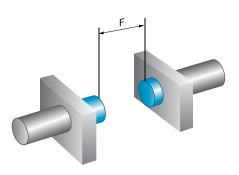
#### Flush installation



Non-flush installation





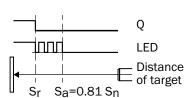


## Installation note

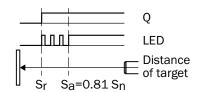
	Installation	Sensing range Sn	Α	В	С	D	E	F
IMB08-02Bxxxxxx	Flush	2 mm	-	6.5 mm	8 mm	6 mm	-	16 mm
IMB08-04Nxxxxxx	Non-flush	4 mm	8 mm	18 mm	8 mm	12 mm	8 mm	32 mm

## Installation aid

Normally closed



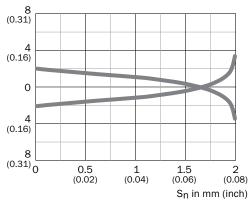
## Normally open



## Response curve

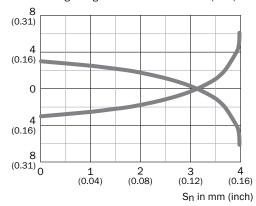
#### Flush installation

Distance target edge from the sensor in mm (inch)



#### Non-flush installation

Distance target edge from the sensor in mm (inch)



# THE RUGGED STANDARD FOR USE IN HARSH ENVIRONMENTS



### **Product description**

The inductive IMB proximity sensor is a byword for reliability in harsh working conditions, whether it is in contact with cooling lubricants or being used outdoors. With its extended sensing ranges, made highly precise thanks to the use of SICK ASIC technology, the IMB ensures reliable, stable processes. What's more, its wide-ranging specification limits allow the IMB to be used in applications where specialist devices were once the only solution – a huge benefit when it

comes to product selection and ware-housing. The visual adjustment indicator and self-locking nuts save time during commissioning and help cut down on errors. Communication via IO-Link is also possible, creating more flexibility and adding more functions for automation applications. With an extensive standard product portfolio available, even special devices can be put into action quickly and easily.

#### At a glance

- Type M12
- Extended sensing ranges: 4 to 8 mm
- Electrical wiring: DC 2/3/4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C to 100 °C
- Rugged stainless steel housing, sensing face made of plastic (LCP)
- Visual installation aid, IO-Link-compatible
- Resistant to oils and cooling lubricants; suitable for use outdoors

#### Your benefits

- Straightforward product selection as fewer sensor variants are required

   one sensor suits a whole range of applications
- Stable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life, even in harsh working conditions
- Quick and easy installation thanks to visual installation aid and self-locking nuts
- High degree of flexibility and communication options thanks to IO-Link
- Easy to implement customer-specific variants within the standard product portfolio



#### Additional information

Detailed technical data 15
Ordering information
Dimensional drawings 18
Connection diagram
Installation note 20
Installation aid 20
Response curve
Accessories



For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more



## Detailed technical data

## **Features**

	DC 2-wire	DC 3-wire	DC 4-wire
Housing	Cylindrical		
Thread size	M12 x 1		
Sensing range S <sub>n</sub>			
Flush	4 mm		
Non-flush	8 mm		
Assured sensing range S <sub>a</sub>			
Flush	3.24 mm		
Non-flush	6.48 mm		
Installation type	Flush / non-flush (depending of	on type)	
Switching frequency	2,000 Hz		
Output type	-	NPN / PNP (depending on type	e)
Output function	NO	NC / NO (depending on type)	Complementary
Electrical wiring	DC 2-wire	DC 3-wire	DC 4-wire
Enclosure rating	IP 68 <sup>1)</sup> IP 69K <sup>2)</sup>		
Special features	Resistant against coolant lubricants, visual installation aid	Resistant against coolant lubricants, visual installation aid Capable of communication via IO-Link 1.0 (depending on type)	Resistant against coolant lubricants Capable of communication via IO-Link 1.0 (depending on type)

 $<sup>^{\</sup>mbox{\tiny 1)}}$  According to EN 60529.

## Mechanics/electronics

	DC 2-wire	DC 3-wire	DC 4-wire				
Supply voltage	10 V DC 30 V DC						
Ripple	≤ 10 %						
Voltage drop	≤ 4 V ¹) ≤ 4.5 V ²)						
Current consumption	-	≤ 10 mA <sup>3)</sup>					
Time delay before availability	≤ 100 ms						
Hysteresis	3 % 20 %						
Repeatability 4) 5)	≤ 2 %						
Temperature drift (of S <sub>r</sub> )	± 10 %						
EMC	According to EN 60947-5-2						
Continuous current I <sub>a</sub>	≤ 100 mA	≤ 200 mA					
Off-state current	Typ. 0.8 mA ( $\leq$ 1.2 mA at Ub max and 100 ° C)	-					
Load resistance, min.	≥ 3 mA	-					

 $<sup>^{1)}</sup>$  At  $I_a = 30$  mA.

 $<sup>^{\</sup>scriptscriptstyle 2)}$  According to ISO 20653:2013-03.

 $<sup>^{2)}</sup>$  At  $I_a$  max.

<sup>3)</sup> Without load.

<sup>4)</sup> Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>6)</sup> With gold plated contact pins.

<sup>7)</sup> Valid if toothed side of nut is used.

 $<sup>^{\</sup>rm 8)}$  Reference voltage DC 50 V.

	DC 2-wire	DC 3-wire	DC 4-wire
Connection type	Cable, 2 m, PUR Male connector, M12 <sup>6)</sup> (depending on type)		Male connector, M12 <sup>6)</sup>
Short-circuit protection	<b>✓</b>		
Reverse polarity protection	<b>✓</b>		
Power-up pulse protection	-	<b>✓</b>	
Power-up pulse	≤ 5 ms	-	
Shock and vibration resistance	100 g / 11 ms / 1000 cycles; : 15 g	150 g / 1 Mio cycles; 10 Hz 5	5 Hz, 1 mm / 55 z 500 Hz /
Ambient operating temperature	-40 °C +100 °C		
Housing material	V2A (1.4305)		
Sensing face material	Plastic (LCP)		
Tightening torque, max. 7)	Typ. 32 Nm		
Protection class 8)	II		

<sup>&</sup>lt;sup>1)</sup> At I<sub>a</sub> = 30 mA. <sup>2)</sup> At I<sub>a</sub> max.

## Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	
Flush	Approx. 0.65
Non-flush	Approx. 0.67
Aluminum (AI)	
Flush	Approx. 0.35
Non-flush	Approx. 0.42
Copper (Cu)	
Flush	Approx. 0.24
Non-flush	Approx. 0.35
Brass (Br)	
Flush	Approx. 0.38
Non-flush	Approx. 0.42

## Ordering information

Other models → www.mysick.com/en/IMB12

## DC 2-wire

Installation type	Sensing range S <sub>n</sub>	Housing	Connection	Output function	Connection diagram	Туре	Part no.
		Short-body	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB12-04BDSVU2K	1074368
Flush	Flush 4 mm	4 mm	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB12-04BDSVU2S	1074365
		Standard	Male connector, M12, 4-pin	NO	Cd-015	IMB12-04BDSVC0S	1074364

<sup>3)</sup> Without load.

 $<sup>^{\</sup>mbox{\tiny 4)}}$  Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>&</sup>lt;sup>6)</sup> With gold plated contact pins.

<sup>7)</sup> Valid if toothed side of nut is used.

<sup>&</sup>lt;sup>8)</sup> Reference voltage DC 50 V.

Installation type	Sensing range S <sub>n</sub>	Housing	Connection	Output function	Connection diagram	Туре	Part no.
	Non-flush 8 mm	Short-body	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB12-08NDSVU2K	1076281
Non-flush		Standard	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB12-08NDSVU2S	1076278
			Male connector, M12, 4-pin	NO	Cd-015	IMB12-08NDSVC0S	1076277

## DC 3-wire

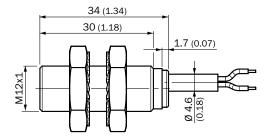
Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connec- tion	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.
					NC	-	Cd-003	IMB12-04BNOVU2K	1072757
			Cable,	NPN	NO	-	Cd-001	IMB12-04BNSVU2K	1072756
			3-wire, 2 m, PUR		NC	-	Cd-003	IMB12-04BP0VU2K	1072755
			2 111, 1 011	PNP	NO	<b>v</b>	Cd-001	IMB12-04BPSVU2K	1072754
		Short-body			NC	-	Cd-008	IMB12-04BNOVCOK	1072749
			Male	NPN	NO	-	Cd-007	IMB12-04BNSVC0K	1070172
			connector, M12, 4-pin		NC	-	Cd-008	IMB12-04BPOVC0K	1072748
			, ,	PNP	NO	V	Cd-007	IMB12-04BPSVC0K	1072747
Flush	4 mm			NIDNI	NC	-	Cd-003	IMB12-04BNOVU2S	1072742
			Cable,	NPN	NO	-	Cd-001	IMB12-04BNSVU2S	1072741
			3-wire, 2 m, PUR	DND	NC	-	Cd-003	IMB12-04BP0VU2S	1072765
		C+		PNP	NO	<b>✓</b>	Cd-001	IMB12-04BPSVU2S	1072455
		Standard		NDN	NC	-	Cd-008	IMB12-04BNOVCOS	1072738
			Male	NPN	NO	-	Cd-007	IMB12-04BNSVC0S	1072737
			connector, M12, 4-pin	PNP	NC	-	Cd-008	IMB12-04BPOVCOS	1072736
					NO	<b>~</b>	Cd-007	IMB12-04BPSVC0S	1072763
				NPN	NC	-	Cd-003	IMB12-08NNOVU2K	1072761
			Cable,	INFIN	NO	-	Cd-001	IMB12-08NNSVU2K	1072760
			3-wire, 2 m, PUR	PNP	NC	-	Cd-003	IMB12-08NPOVU2K	1072759
		Short-body			NO	<b>V</b>	Cd-001	IMB12-08NPSVU2K	1072758
		Short-body		NPN	NC	-	Cd-008	IMB12-08NNOVCOK	1072753
			Male connector,	INFIN	NO	-	Cd-007	IMB12-08NNSVC0K	1072752
			M12, 4-pin	PNP	NC	-	Cd-008	IMB12-08NPOVCOK	1072751
Non-flush	8 mm			FINE	NO	<b>v</b>	Cd-007	IMB12-08NPSVC0K	1072750
Non-nusn	O IIIIII			NPN	NC	-	Cd-003	IMB12-08NNOVU2S	1072746
			Cable, 3-wire,	INFIN	NO	-	Cd-001	IMB12-08NNSVU2S	1072745
			2 m, PUR	PNP	NC	-	Cd-003	IMB12-08NPOVU2S	1072744
		Standard		FINE	NO	~	Cd-001	IMB12-08NPSVU2S	1072743
		Standard		NPN	NC	-	Cd-008	IMB12-08NNOVCOS	1072740
			Male connector,	INIIN	NO	-	Cd-007	IMB12-08NNSVC0S	1072764
			M12, 4-pin	PNP	NC	-	Cd-008	IMB12-08NPOVCOS	1072739
				III	NO	<b>~</b>	Cd-007	IMB12-08NPSVC0S	1070171

#### DC 4-wire

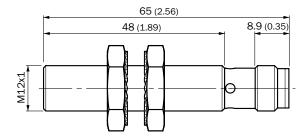
Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connec- tion	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.							
		Chart hady	Male	NPN	Comple- mentary	-	Cd-006	IMB12-04BNPVCOK	1074367							
Flush	4 mm	Short-body	connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB12-04BPPVCOK	1074366							
FluSii	Stan	4 111111	Chandand	C+	C+	C+	Ctondoud	Male	NPN	Comple- mentary	-	Cd-006	IMB12-04BNPVCOS	1074361		
		Standard	connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB12-04BPPVCOS	1074359							
		Short-body	01 11 1	01 11 1	Ob and banks	Charle hade	Chart hade	Chart bady	Short hady	Male	NPN	Comple- mentary	-	Cd-006	IMB12-08NNPVCOK	1076280
Non-fluor			connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB12-08NPPVCOK	1076279							
Non-flush 8 mm	o illili		Male	NPN	Comple- mentary	-	Cd-006	IMB12-08NNPVCOS	1074362							
	Standard	connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB12-08NPPVCOS	1074360								

## Dimensional drawings (Dimensions in mm (inch))

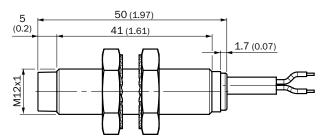
IMB12 Short-body housing, cable, flush



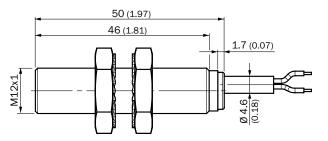
IMB12 Standard, connector, M12, flush



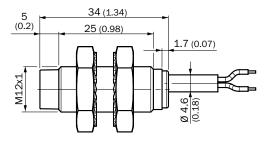
IMB12 Standard, cable, non-flush



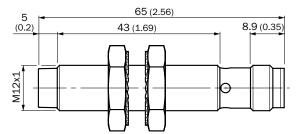
IMB12 standard, cable, flush



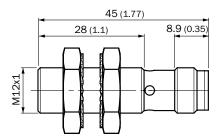
IMB12 Short-body housing, cable, non-flush



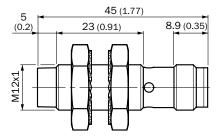
IMB12 Standard, connector M12, non-flush



IMB12 Short-body housing, connector M12, flush



IMB12 Short-body housing, connector M12, non-flush

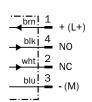


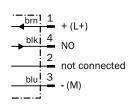
## Connection diagram

Cd-001

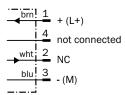








Cd-008



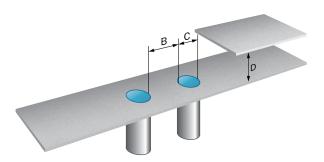
Cd-012



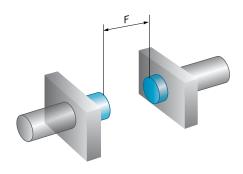
Cd-015

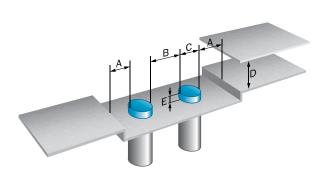
## Installation note

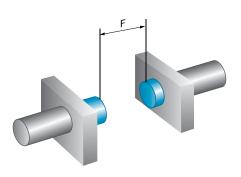
#### Flush installation



Non-flush installation





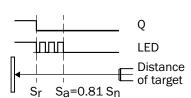


## Installation note

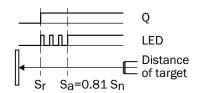
	Installation	Sensing range Sn	Α	В	С	D	Е	F
IMB12-04Bxxxxxx	Flush	4 mm	-	12 mm	12 mm	12 mm	-	32 mm
IMB12-08Nxxxxxx	Non-flush	8 mm	12 mm	24 mm	12 mm	24 mm	16 mm	64 mm

## Installation aid

Normally closed



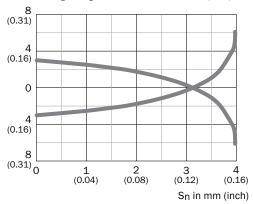
## Normally open



## Response curve

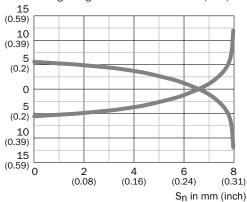
#### Flush installation

Distance target edge from the sensor in mm (inch)



#### Non-flush installation

Distance target edge from the sensor in mm (inch)



# THE RUGGED STANDARD FOR USE IN HARSH ENVIRONMENTS







#### Additional information

Detailed technical data 23
Ordering information
Dimensional drawings 26
Connection diagram27
Installation note 28
Installation aid
Response curve
Accessories

#### **Product description**

The inductive IMB proximity sensor is a byword for reliability in harsh working conditions, whether it is in contact with cooling lubricants or being used outdoors. With its extended sensing ranges, made highly precise thanks to the use of SICK ASIC technology, the IMB ensures reliable, stable processes. What's more, its wide-ranging specification limits allow the IMB to be used in applications where specialist devices were once the only solution – a huge benefit when it

comes to product selection and ware-housing. The visual adjustment indicator and self-locking nuts save time during commissioning and help cut down on errors. Communication via IO-Link is also possible, creating more flexibility and adding more functions for automation applications. With an extensive standard product portfolio available, even special devices can be put into action quickly and easily.

#### At a glance

- Type M18
- Extended sensing ranges: 8 to 12 mm
- Electrical wiring: DC 2/3/4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C to 100 °C
- Rugged stainless steel housing, sensing face made of plastic (LCP)
- Visual installation aid, IO-Link-compatible
- Resistant to oils and cooling lubricants; suitable for use outdoors

#### Your benefits

- Straightforward product selection as fewer sensor variants are required

   one sensor suits a whole range of applications
- Stable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life, even in harsh working conditions
- Quick and easy installation thanks to visual installation aid and self-locking nuts
- High degree of flexibility and communication options thanks to IO-Link
- Easy to implement customer-specific variants within the standard product portfolio

#### → www.mysick.com/en/IMB18

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

## **Features**

	DC 2-wire	DC 3-wire	DC 4-wire
Housing	Cylindrical		
Thread size	M18 x 1		
Sensing range S <sub>n</sub>			
Flush	8 mm		
Non-flush	12 mm		
Assured sensing range S <sub>a</sub>			
Flush	6.48 mm		
Non-flush	9.72 mm		
Installation type	Flush / non-flush (depending of	on type)	
Switching frequency	1,000 Hz		
Output type	-	NPN / PNP (depending on type	e)
Output function	NO	NC / NO (depending on type)	Complementary
Electrical wiring	DC 2-wire	DC 3-wire	DC 4-wire
Enclosure rating	IP 68 <sup>1)</sup> IP 69K <sup>2)</sup>		
Special features	Resistant against coolant lubricants, visual installation aid	Resistant against coolant lubricants, visual installation aid Capable of communication via IO-Link 1.0 (depending on type)	Resistant against coolant lubricants Capable of communication via IO-Link 1.0 (depending on type)

 $<sup>^{\</sup>mbox{\tiny 1)}}$  According to EN 60529.

## Mechanics/electronics

	DC 2-wire	DC 3-wire	DC 4-wire
Supply voltage	10 V DC 30 V DC		
Ripple	≤ 10 %		
Voltage drop	≤ 4 V ¹) ≤ 4.5 V ²)	≤ 2 V <sup>2)</sup>	
Current consumption	-	≤ 10 mA <sup>3)</sup>	
Time delay before availability	≤ 100 ms		
Hysteresis	3 % 20 %		
Repeatability 4) 5)	≤ 2 %		
Temperature drift (of S <sub>r</sub> )	± 10 %		
EMC	According to EN 60947-5-2		
Continuous current I <sub>a</sub>	≤ 100 mA	≤ 200 mA	
Off-state current	Typ. 0.8 mA (≤ 1.2 mA at Ub max and 100 ° C)	-	
Load resistance, min.	≥ 3 mA	-	

 $<sup>^{1)}</sup>$  At  $I_a = 30$  mA.

 $<sup>^{\</sup>scriptscriptstyle 2)}$  According to ISO 20653:2013-03.

 $<sup>^{2)}</sup>$  At  $I_a$  max.

<sup>3)</sup> Without load.

<sup>4)</sup> Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>6)</sup> With gold plated contact pins.

<sup>7)</sup> Valid if toothed side of nut is used.

 $<sup>^{\</sup>rm 8)}$  Reference voltage DC 50 V.

	DC 2-wire	DC 3-wire	DC 4-wire
Connection type	Cable, 2 m, PUR Male connector, M12 <sup>6)</sup> (depending on type)		Male connector, M12 <sup>6)</sup>
Short-circuit protection	<b>✓</b>		
Reverse polarity protection	<b>✓</b>		
Power-up pulse protection	-	<b>✓</b>	
Power-up pulse	≤ 5 ms	-	
Shock and vibration resistance	100 g / 11 ms / 1000 cycles; : 15 g	150 g / 1 Mio cycles; 10 Hz 5	5 Hz, 1 mm / 55 z 500 Hz /
Ambient operating temperature	-40 °C +100 °C		
Housing material	V2A (1.4305)		
Sensing face material	Plastic (LCP)		
Tightening torque, max. 7)	Typ. 90 Nm		
Protection class 8)	II		

<sup>&</sup>lt;sup>1)</sup> At I<sub>a</sub> = 30 mA. <sup>2)</sup> At I<sub>a</sub> max.

## Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	
Flush	Approx. 0.55
Non-flush	Approx. 0.7
Aluminum (AI)	
Flush	Approx. 0.24
Non-flush	Approx. 0.43
Copper (Cu)	
Flush	Approx. 0.19
Non-flush	Approx. 0.37
Brass (Br)	
Flush	Approx. 0.24
Non-flush	Approx. 0.43

## Ordering information

Other models → www.mysick.com/en/IMB18

## DC 2-wire

Installation type	Sensing range S <sub>n</sub>	Housing	Connection	Output function	Connection diagram	Туре	Part no.
		Short-body	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB18-08BDSVU2K	1074380
Flush	Flush 8 mm	1	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB18-08BDSVU2S	1074374
Tiudii C		Standard	Male connector, M12, 4-pin	NO	Cd-015	IMB18-08BDSVC0S	1074373

<sup>3)</sup> Without load.

 $<sup>^{\</sup>mbox{\tiny 4)}}$  Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>&</sup>lt;sup>6)</sup> With gold plated contact pins.

<sup>7)</sup> Valid if toothed side of nut is used.

<sup>&</sup>lt;sup>8)</sup> Reference voltage DC 50 V.

Installation type	Sensing range S <sub>n</sub>	Housing	Connection	Output function	Connection diagram	Туре	Part no.
		Short-body	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB18-12NDSVU2K	1076283
Non-flush	12 mm	12 mm Standard	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB18-12NDSVU2S	1074375
Non hush			Male connector, M12, 4-pin	NO	Cd-015	IMB18-12NDSVC0S	1076282

## DC 3-wire

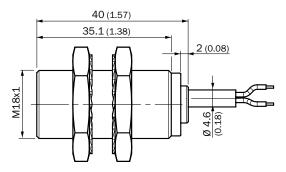
Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connec- tion	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.
					NC	-	Cd-003	IMB18-08BNOVU2K	1072830
			Cable,	NPN	NO	-	Cd-001	IMB18-08BNSVU2K	1072829
			3-wire, 2 m, PUR		NC	-	Cd-003	IMB18-08BP0VU2K	1072456
			2 111, 1 011	PNP	NO	<b>v</b>	Cd-001	IMB18-08BPSVU2K	1072828
		Short-body			NC	-	Cd-008	IMB18-08BNOVCOK	1072823
			Male	NPN	NO	-	Cd-007	IMB18-08BNSVC0K	1070174
			connector, M12, 4-pin		NC	-	Cd-008	IMB18-08BPOVCOK	1072822
			, ,	PNP	NO	V	Cd-007	IMB18-08BPSVC0K	1072821
Flush	8 mm			NIDNI	NC	-	Cd-003	IMB18-08BN0VU2S	1072816
			Cable,	NPN	NO	-	Cd-001	IMB18-08BNSVU2S	1072815
			3-wire, 2 m, PUR	DND	NC	-	Cd-003	IMB18-08BP0VU2S	1072814
		C+		PNP	NO	<b>~</b>	Cd-001	IMB18-08BPSVU2S	1072813
		Standard	Male connector, M12, 4-pin	NPN	NC	-	Cd-008	IMB18-08BNOVCOS	1072809
					NO	-	Cd-007	IMB18-08BNSVC0S	1072808
				PNP	NC	-	Cd-008	IMB18-08BPOVCOS	1072807
					NO	<b>✓</b>	Cd-007	IMB18-08BPSVC0S	1072806
			Cable, 3-wire, 2 m, PUR		NC	-	Cd-003	IMB18-12NNOVU2K	1072834
					NO	-	Cd-001	IMB18-12NNSVU2K	1072833
				PNP	NC	-	Cd-003	IMB18-12NPOVU2K	1072832
		Ob and to the			NO	<b>~</b>	Cd-001	IMB18-12NPSVU2K	1072831
		Short-body		NPN	NC	-	Cd-008	IMB18-12NNOVCOK	1072827
			Male connector,	INFIN	NO	-	Cd-007	IMB18-12NNSVCOK	1072826
			M12, 4-pin	PNP	NC	-	Cd-008	IMB18-12NPOVCOK	1072825
Non-flush	12 mm			PINP	NO	<b>V</b>	Cd-007	IMB18-12NPSVCOK	1072824
NOII-IIUSII	12 111111			NPN	NC	-	Cd-003	IMB18-12NNOVU2S	1072820
			Cable, 3-wire,	INFIN	NO	-	Cd-001	IMB18-12NNSVU2S	1072819
			2 m, PUR	PNP	NC	-	Cd-003	IMB18-12NPOVU2S	1072818
		Standard		FINE	NO	~	Cd-001	IMB18-12NPSVU2S	1072817
		Stanuaru		NPN	NC	-	Cd-008	IMB18-12NNOVCOS	1072812
			Male connector,	INTIN	NO	-	Cd-007	IMB18-12NNSVCOS	1072811
			M12, 4-pin	PNP	NC	-	Cd-008	IMB18-12NPOVCOS	1072810
				FINE	NO	~	Cd-007	IMB18-12NPSVCOS	1070173

## DC 4-wire

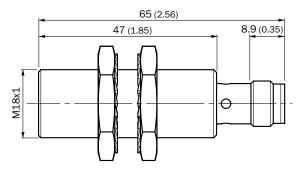
Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connec- tion	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.			
		Chaut bady	Male	NPN	Comple- mentary	-	Cd-006	IMB18-08BNPVC0K	1074378			
Eluah	Q mm	Short-body	connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB18-08BPPVC0K	1074376			
Flusii	Flush 8 mm	Standard	Ct	Male	NPN	Comple- mentary	-	Cd-006	IMB18-08BNPVCOS	1074371		
			andard connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB18-08BPPVCOS	1074369			
		Short-body	01 11 1	Chart hady	Chart bady	Male	NPN	Comple- mentary	-	Cd-006	IMB18-12NNPVCOK	1074379
Non fluck			connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB18-12NPPVC0K	1074377			
Non-flush 12 mm	Standard	Male	NPN	Comple- mentary	-	Cd-006	IMB18-12NNPVCOS	1074372				
		connector, M12, 4-pin	PNP	Comple- mentary	<b>~</b>	Cd-006	IMB18-12NPPVCOS	1074370				

## Dimensional drawings (Dimensions in mm (inch))

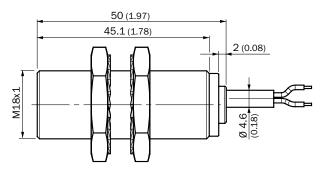
IMB18 Short-body housing, cable, flush



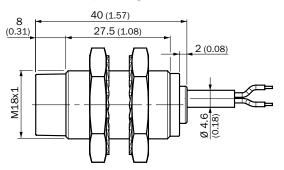
#### IMB18 Standard, connector, M12, flush



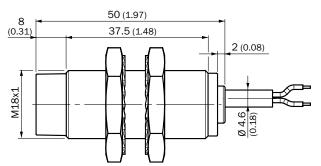
#### IMB18 Standard, cable, flush



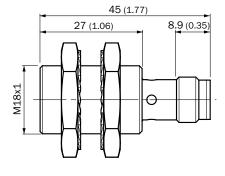
IMB18 Short-body housing, cable, non-flush



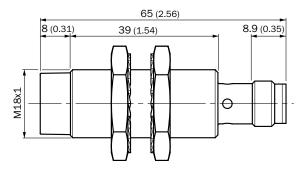
#### IMB18 Standard, cable, non-flush



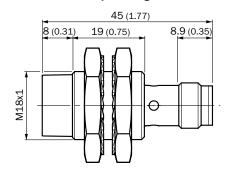
## IMB18 Short-body housing, connector M12, flush



#### IMB18 Standard, connector M12, non-flush



IMB18 Short-body housing, connector M12, non-flush



## Connection diagram



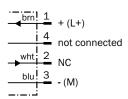


Cd-003



Cd-006

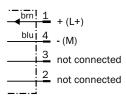
Cd-008



Cd-012

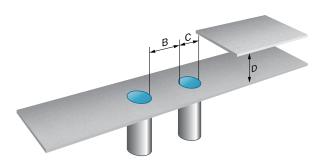


Cd-015

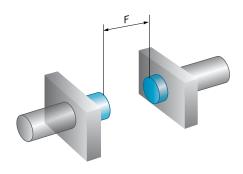


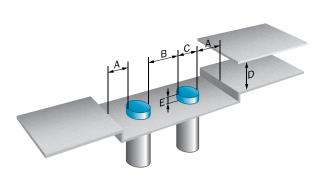
## Installation note

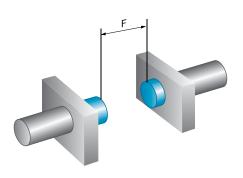
#### Flush installation



Non-flush installation





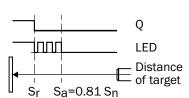


## Installation note

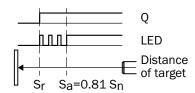
	Installation	Sensing range Sn	Α	В	С	D	Е	F
IMB18-08Bxxxxxx	Flush	8 mm	9 mm	18 mm	18 mm	24 mm	2 mm	64 mm
IMB18-12Nxxxxxx	Non-flush	12 mm	18 mm	34 mm	18 mm	34 mm	12 mm	96 mm

## Installation aid

Normally closed



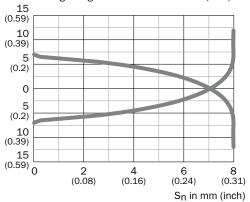
## Normally open



## Response curve

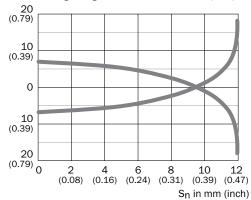
#### Flush installation

Distance target edge from the sensor in mm (inch)



#### Non-flush installation

Distance target edge from the sensor in mm (inch)



# THE RUGGED STANDARD FOR USE IN HARSH ENVIRONMENTS







#### Additional information

Detailed technical data
Ordering information 32
Dimensional drawings 34
Connection diagram
Installation note
Installation aid
Response curve37
Accessories

### **Product description**

The inductive IMB proximity sensor is a byword for reliability in harsh working conditions, whether it is in contact with cooling lubricants or being used outdoors. With its extended sensing ranges, made highly precise thanks to the use of SICK ASIC technology, the IMB ensures reliable, stable processes. What's more, its wide-ranging specification limits allow the IMB to be used in applications where specialist devices were once the only solution – a huge benefit when it

comes to product selection and ware-housing. The visual adjustment indicator and self-locking nuts save time during commissioning and help cut down on errors. Communication via IO-Link is also possible, creating more flexibility and adding more functions for automation applications. With an extensive standard product portfolio available, even special devices can be put into action quickly and easily.

#### At a glance

- Type M30
- Extended sensing ranges: 15 to 20 mm
- Electrical wiring: DC 2/3/4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C to 100 °C
- Rugged stainless steel housing, sensing face made of plastic (LCP)
- Visual installation aid, IO-Link-compatible
- Resistant to oils and cooling lubricants; suitable for use outdoors

#### Your benefits

- Straightforward product selection as fewer sensor variants are required

   one sensor suits a whole range of applications
- Stable processes thanks to extended, highly precise sensing ranges enabled through the use of the latest SICK ASIC technology
- Reduced machine downtimes thanks to longer sensor service life, even in harsh working conditions
- Quick and easy installation thanks to visual installation aid and self-locking nuts
- High degree of flexibility and communication options thanks to IO-Link
- Easy to implement customer-specific variants within the standard product portfolio

#### → www.mysick.com/en/IMB30

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

## **Features**

	DC 2-wire	DC 3-wire	DC 4-wire
Housing	Cylindrical		
Thread size	M30 x 1.5		
Sensing range S <sub>n</sub>			
Flush	15 mm		
Non-flush	20 mm		
Assured sensing range S <sub>a</sub>			
Flush	12.15 mm		
Non-flush	16.2 mm		
Installation type	Flush / non-flush (depending of	on type)	
Switching frequency	500 Hz		
Output type	-	NPN / PNP (depending on type	e)
Output function	NO	NC / NO (depending on type)	Complementary
Electrical wiring	DC 2-wire	DC 3-wire	DC 4-wire
Enclosure rating	IP 68 <sup>1)</sup> IP 69K <sup>2)</sup>		
Special features	Resistant against coolant lubricants, visual installation aid	Resistant against coolant lubricants, visual installation aid Capable of communication via IO-Link 1.0 (depending on type)	Resistant against coolant lubricants Capable of communication via IO-Link 1.0 (depending on type)

 $<sup>^{\</sup>mbox{\tiny 1)}}$  According to EN 60529.

## Mechanics/electronics

	DC 2-wire	DC 3-wire	DC 4-wire
Supply voltage	10 V DC 30 V DC		
Ripple	≤ 10 %		
Voltage drop	$\leq$ 4 V $^{1)}$ $\leq$ 4.5 V $^{2)}$	≤ 2 V <sup>2)</sup>	
Current consumption	-	≤ 10 mA <sup>3)</sup>	
Time delay before availability	≤ 100 ms		
Hysteresis	3 % 20 %		
Repeatability 4) 5)	≤ 2 %		
Temperature drift (of S <sub>r</sub> )	± 10 %		
EMC	According to EN 60947-5-2		
Continuous current I <sub>a</sub>	≤ 100 mA	≤ 200 mA	
Off-state current	Typ. 0.8 mA ( $\leq$ 1.2 mA at Ub max and 100 ° C)	-	
Load resistance, min.	≥ 3 mA	-	
Connection type	Cable, 2 m, PUR / Male connec	ctor, M12 <sup>6)</sup> (depending on type)	

 $<sup>^{1)}</sup>$  At  $I_a = 30 \text{ mA}$ .

 $<sup>^{\</sup>scriptscriptstyle 2)}$  According to ISO 20653:2013-03.

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

<sup>3)</sup> Without load.

<sup>4)</sup> Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>&</sup>lt;sup>6)</sup> With gold plated contact pins.

 $<sup>^{7)}\,\</sup>mbox{Valid}$  if toothed side of nut is used.

<sup>8)</sup> Reference voltage DC 50 V.

	DC 2-wire	DC 3-wire	DC 4-wire
Short-circuit protection	✓		
Reverse polarity protection	<b>✓</b>		
Power-up pulse protection	-	✓	
Power-up pulse	≤ 5 ms	-	≤ 5 ms
Shock and vibration resistance	100 g / 11 ms / 1000 cycles; : 15 g	150 g / 1 Mio cycles; 10 Hz 5	5 Hz, 1 mm / 55 z 500 Hz /
Ambient operating temperature	-40 °C +100 °C		
Housing material	V2A (1.4305)		
Sensing face material	Plastic (LCP)		
Tightening torque, max. 7)	Typ. 100 Nm		
Protection class 8)	II		

<sup>&</sup>lt;sup>1)</sup> At  $I_a = 30 \text{ mA}$ .

## **Reduction factors**

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	
Flush	Approx. 0.62
Non-flush	Approx. 0.78
Aluminum (Al)	
Flush	Approx. 0.26
Non-flush	Approx. 0.44
Copper (Cu)	
Flush	Approx. 0.17
Non-flush	Approx. 0.36
Brass (Br)	
Flush	Approx. 0.27
Non-flush	Approx. 0.46

## Ordering information

Other models → www.mysick.com/en/IMB30

## DC 2-wire

Installation type	Sensing range S <sub>n</sub>	Housing	Connection	Output function	Connection diagram	Туре	Part no.
Flush 15 i		Short-body	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB30-15BDSVU2K	1074420
	15 mm	Standard	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB30-15BDSVU2S	1074413
			Male connector, M12, 4-pin	NO	Cd-015	IMB30-15BDSVC0S	1074410
Non-flush	20 mm	Short-body	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB30-20NDSVU2K	1076284
		Standard	Cable, 2-wire, 2 m, PUR	NO	Cd-012	IMB30-20NDSVU2S	1074414
			Male connector, M12, 4-pin	NO	Cd-015	IMB30-20NDSVC0S	1076291

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

<sup>3)</sup> Without load.

 $<sup>^{\</sup>mbox{\tiny 4)}}$  Ub and Ta constant.

<sup>&</sup>lt;sup>5)</sup> Of Sr.

<sup>&</sup>lt;sup>6)</sup> With gold plated contact pins.

 $<sup>^{7)}\,\</sup>mbox{Valid}$  if toothed side of nut is used.

 $<sup>^{\</sup>rm 8)}$  Reference voltage DC 50 V.

## DC 3-wire

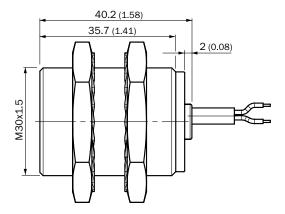
Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connec- tion	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.
				NPN	NC	-	Cd-003	IMB30-15BNOVU2K	1072858
			Cable, 3-wire, 2 m, PUR		NO	-	Cd-001	IMB30-15BNSVU2K	1072857
				PNP	NC	-	Cd-003	IMB30-15BP0VU2K	1072856
					NO	<b>V</b>	Cd-001	IMB30-15BPSVU2K	1072457
		Short-body	Male	NPN	NC	-	Cd-008	IMB30-15BNOVCOK	1072851
					NO	-	Cd-007	IMB30-15BNSVC0K	1072850
			connector, M12, 4-pin	DND	NC	-	Cd-008	IMB30-15BPOVCOK	1072849
Flore	45			PNP	NO	<b>~</b>	Cd-007	IMB30-15BPSVC0K	1070176
Flush	15 mm			NIDNI	NC	-	Cd-003	IMB30-15BN0VU2S	1072844
			Cable,	NPN	NO	-	Cd-001	IMB30-15BNSVU2S	1072843
			3-wire, 2 m, PUR	DND	NC	-	Cd-003	IMB30-15BP0VU2S	1072842
			,	PNP	NO	<b>~</b>	Cd-001	IMB30-15BPSVU2S	1072841
		Standard	Male connector, M12, 4-pin	NPN	NC	-	Cd-008	IMB30-15BNOVCOS	1072837
					NO	-	Cd-007	IMB30-15BNSVC0S	1072836
				PNP	NC	-	Cd-008	IMB30-15BP0VC0S	1072835
					NO	<b>~</b>	Cd-007	IMB30-15BPSVC0S	1072602
		Short-body	Cable, 3-wire, 2 m, PUR	NPN	NC	-	Cd-003	IMB30-20NNOVU2K	1072862
					NO	-	Cd-001	IMB30-20NNSVU2K	1072861
				PNP	NC	-	Cd-003	IMB30-20NPOVU2K	1072860
					NO	<b>V</b>	Cd-001	IMB30-20NPSVU2K	1072859
			Male connector, M12, 4-pin	NPN	NC	-	Cd-008	IMB30-20NNOVCOK	1072855
					NO	-	Cd-007	IMB30-20NNSVC0K	1072854
				DND	NC	-	Cd-008	IMB30-20NPOVC0K	1072853
Non-flush	20 mm			PNP	NO	<b>V</b>	Cd-007	IMB30-20NPSVC0K	1072852
NOTI-IIUSII	20 111111	Standard		NDN	NC	-	Cd-003	IMB30-20NNOVU2S	1072848
			Cable,	NPN	NO	-	Cd-001	IMB30-20NNSVU2S	1072847
			3-wire, 2 m, PUR	PNP	NC	-	Cd-003	IMB30-20NP0VU2S	1072846
				PNP	NO	<b>~</b>	Cd-001	IMB30-20NPSVU2S	1072845
				NPN	NC	-	Cd-008	IMB30-20NNOVCOS	1072840
			Male	INTIN	NO	-	Cd-007	IMB30-20NNSVC0S	1070175
			connector, M12, 4-pin	PNP	NC	-	Cd-008	IMB30-20NPOVCOS	1072839
					NO	<b>~</b>	Cd-007	IMB30-20NPSVC0S	1072838

## DC 4-wire

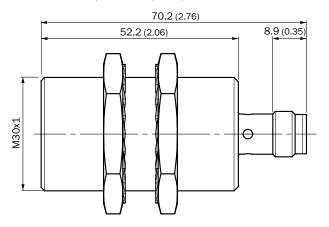
Installa- tion type	Sensing range S <sub>n</sub>	Housing	Connec- tion	Output type	Output function	IO-Link	Con- nection diagram	Туре	Part no.
		Short-body	Male connector, M12, 4-pin	NPN	Comple- mentary	-	Cd-006	IMB30-15BNPVC0K	1074417
				PNP	Comple- mentary	~	Cd-006	IMB30-15BPPVC0K	1074406
Flush 15 mm		Cable, 4-wire, 2 m, PUR	PNP	Comple- mentary	V	Cd-005	IMB30-15BPPVU2S	1074415	
		Standard	Male	NPN	Comple- mentary	-	Cd-006	IMB30-15BNPVCOS	1074408
		connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB30-15BPPVC0S	1074411	
		01 11 1	Male	NPN	Comple- mentary	-	Cd-006	IMB30-20NNPVCOK	1074418
Non-flush 20 mm	Short-body	connector, M12, 4-pin	PNP	Comple- mentary	~	Cd-006	IMB30-20NPPVC0K	1074416	
	∠∪ mm	0	Male	NPN	Comple- mentary	-	Cd-006	IMB30-20NNPVCOS	1074409
	Standard	ard connector, M12, 4-pin	PNP	Comple- mentary	<b>v</b>	Cd-006	IMB30-20NPPVC0S	1074407	

## Dimensional drawings (Dimensions in mm (inch))

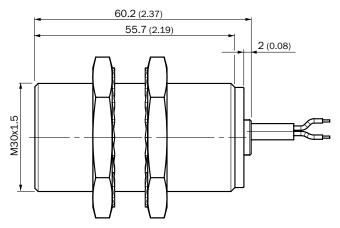
IMB30 Short-body housing, cable, flush



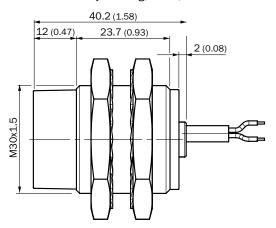
IMB30 Standard, connector, M12, flush



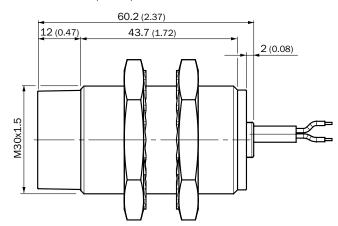
IMB30 Standard, cable, flush



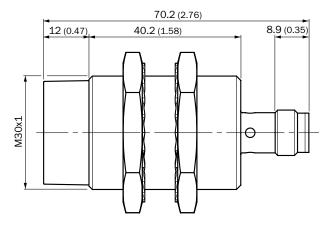
IMB30 Short-body housing, cable, non-flush



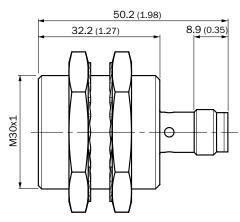
#### IMB30 Standard, cable, non-flush



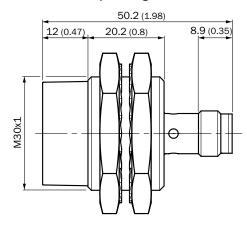
#### IMB30 Standard, connector M12, non-flush



#### IMB30 Short-body housing, connector M12, flush



IMB30 Short-body housing, connector M12, non-flush



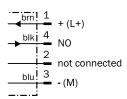
## Connection diagram







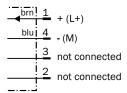
Cd-007



Cd-008

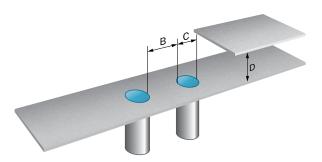


Cd-015

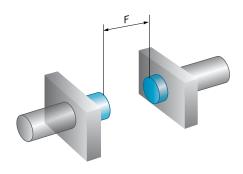


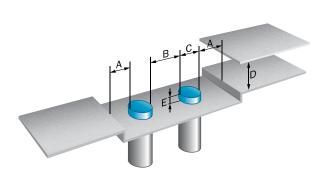
## Installation note

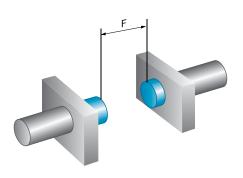
#### Flush installation



Non-flush installation





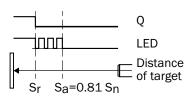


## Installation note

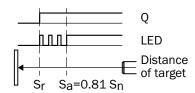
	Installation	Sensing range Sn	Α	В	С	D	E	F
IMB30-15Bxxxxxx	Flush	15 mm	-	40 mm	30 mm	45 mm	-	120 mm
IMB30-20Nxxxxxx	Non-flush	20 mm	20 mm	62 mm	30 mm	60 mm	20 mm	160 mm

## Installation aid

Normally closed



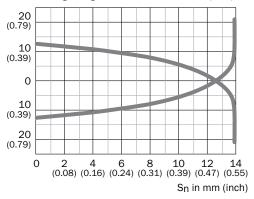
## Normally open



# Response curve

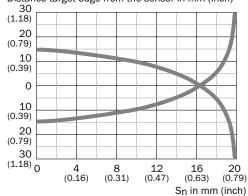
#### Flush installation

Distance target edge from the sensor in mm (inch)



#### Non-flush installation

Distance target edge from the sensor in mm (inch)



# Mounting systems

# Universal bar clamp systems

Figure	Material	Description	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
8	Zinc diecast	Universal bar clamp for mounting bars with 12 mm diameter	BEF-KHS-KH3	5322626	•	•	•	•
	Stainless steel V2A (1.4301)	Universal clamp bracket for mounting bars with 12 mm diameter	BEF-KHS-KH3N	5322627	•	•	•	•
	Zinc plated steel (sheet), Diecast zinc (clamp)	Plate N05 for universal clamp bracket, M12	BEF-KHS-N05	2051611	-	•	-	-
	Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)	Plate N05N for universal clamp bracket, M12	BEF-KHS-N05N	2051621	-	•	-	-
an	Zinc plated steel (sheet), Diecast zinc (clamp)	Plate N06 for universal clamp bracket, M18	BEF-KHS-N06	2051612	-	-	•	-
10	Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)	Plate NO6N for universal clamp bracket, M18	BEF-KHS-N06N	2051622	-	-	•	-
8	Zinc plated steel (sheet), Diecast zinc (clamp)	Plate N10 for universal clamp bracket, M30	BEF-KHS-N10	2062372	-	_	-	•
	Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)	Plate N11N for universal clamp bracket	BEF-KHS-N11N	2071081	•	•	•	•
	0	Mounting bar, straight, 200 mm, steel	BEF-MS12G-A	4056054	•	•	•	•
	Steel, zinc coated	Mounting bar, straight, 300 mm, steel	BEF-MS12G-B	4056055	•	•	•	•
	Chairless short (4 4574)	Mounting bar, straight, 200 mm, stainless steel	BEF-MS12G-NA	4058914	•	•	•	•
	Stainless steel (1.4571)	Mounting bar, straight, 300 mm, stainless steel	BEF-MS12G-NB	4058915	•	•	•	•
		Mounting bar, L-shaped, 150 mm x 150 mm, steel	BEF-MS12L-A	4056052	•	•	•	•
	Steel, zinc coated	Mounting bar, L-shaped, 250 x 250 mm, steel	BEF-MS12L-B	4056053	•	•	•	•
	Stainless staal (1.4574)	Mounting bar, Z-shaped, 150 mm x 70 mm x 150 mm, stainless steel	BEF-MS12Z-NA	4058916	•	•	•	•
	Stainless steel (1.4571)	Mounting bar, Z-shaped, 150 mm x 70 mm x 250 mm, stainless steel	BEF-MS12Z-NB	4058917	•	•	•	•

# Mounting brackets

Figure	Material	Description	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
	Stainless steel	Mounting plate for M12 housing	BEF-WG-M12N	5320950	-	•	-	-

Figure	Material	Description	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
	Stainless steel	Mounting plate for M18 housing	BEF-WG-M18N	5320948	-	-	•	-
		Mounting plate for M8 sensors	BEF-WG-M08	5321722	•	-	-	-
	Steel, zinc coated	Mounting plate for M12 sensors	BEF-WG-M12	5321869	-	•	_	-
		Mounting plate for M18 sensors	BEF-WG-M18	5321870	-	-	•	-
		Mounting plate for M30 sensors	BEF-WG-M30	5321871	-	-	-	•

# Mounting plates

Figure	Material	Description	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
40		Mounting bracket for M12 housing	BEF-WN-M12N	5320949	-	•	_	-
40		Mounting bracket for M18 housing	BEF-WN-M18N	5320947	-	-	•	_
	Stainless steel	Mounting bracket, M8 thread	BEF-WN-M08	5321721	•	-	-	_
40	Ctallings steel	Mounting bracket, M12 thread	BEF-WN-M12	5308447	-	•	-	_
40		Mounting bracket, M18 thread	BEF-WN-M18	5308446	-	-	•	_
40		Mounting bracket, M30 thread	BEF-WN-M30	5308445	-	-	-	•

#### Alignment brackets

Figure	Material	Description	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
9	Plastic	Mounting bracket with ball-and- socket	BEF-WN-M18-ST02	5312973	-	-	•	-

#### Connection systems

Connecting cables with female connector M8, 3-pin, PP, hygienic systems

- Cable material: PP
- Connector material: PP
- Ambient operating temperature: -40 °C ... +105 °C, stationary position; -25 °C ... +105 °C, flexible use
- Locking nut material: stainless steel (V4A/1.4404/316L)
- **Description:** Tested detergent: P3-topactive DES, P3-topactive 200, P3-topax 52, P3-topax 66 und P3-topax 91, Silicone-free, halogen-free, LABS-free

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30	
	Female connector,		2 m, 3-wire	DOL-0803-G02MRN	6058504	•	-	-	-	
	M8, 3-pin, straight,	Cable, open conduc- tor heads	5 m, 3-wire	DOL-0803-G05MRN	6058505	•	-	-	-	
0	unshielded		10 m, 3-wire	DOL-0803-G10MRN	6058506	•	-	-	-	
	Female connector.		2 m, 3-wire	DOL-0803-L02MRN	6058787	•	-	-	-	
	M8, 3-pin, angled,		Cable, open conduc- tor heads	5 m, 3-wire	DOL-0803-L05MRN	6058788	•	-	-	-
	unshielded, with LED	tor moduo	10 m, 3-wire	DOL-0803-L10MRN	6058789	•	-	-	-	
	Female connector,		2 m, 3-wire	DOL-0803-W02MRN	6058507	•	-	-	-	
	M8, 3-pin, angled, unshielded	M8, 3-pin, angled, tor heads	5 m, 3-wire	DOL-0803-W05MRN	6058508	•	-	-	-	
			10 m, 3-wire	DOL-0803-W10MRN	6058509	•	-	-	-	

Connecting cables with female connector M8, 3-pin, PUR, halogen-free, Oil / grease resistant

- Cable material: PUR, halogen-free
- Connector material: TPU
- Ambient operating temperature: -40 °C ... +80 °C, stationary position; -25 °C ... +80 °C, flexible use
- · Locking nut material: zinc die-cast, nickel-plated

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
			1 m, 3-wire	DOL-0803-G01MC	6036455	•	-	-	-
_			2 m, 3-wire	DOL-0803-G02MC	6025888	•	-	-	-
	Female connector,	Cable, open conduc-	3 m, 3-wire	DOL-0803-G03MC	6038991	•	-	-	-
	M8, 3-pin, straight, unshielded	tor heads	5 m, 3-wire	DOL-0803-G05MC	6025889	•	-	-	-
			10 m, 3-wire	DOL-0803-G10MC	6025890	•	-	-	-
			20 m, 3-wire	DOL-0803-G20MC	6036456	•	-	-	-
			2 m, 3-wire	DOL-0803-L02MC	6039080	•	-	-	-
	Female connector,		10 m, 3-wire	DOL-0803-L10MC	6039082	•	-	-	-
	M8, 3-pin, angled,	Cable, open conduc- tor heads	2 m, 3-wire	DOL-0803-W02MC	6025891	•	-	-	-
	unshielded	unshielded tor heads	5 m, 3-wire	DOL-0803-W05MC	6025892	•	-	-	-
			10 m, 3-wire	DOL-0803-W10MC	6025893	•	-	-	-

Connecting cables with female connector M12, 4-pin, PP, hygienic systems

- Cable material: PP
- Connector material: PP
- Ambient operating temperature: -40 °C ... +105 °C, stationary position; -25 °C ... +105 °C, flexible use
- Locking nut material: stainless steel (V4A/1.4404)
- **Description:** Tested detergent: P3-topactive DES, P3-topactive 200, P3-topax 52, P3-topax 66 und P3-topax 91, Silicone-free, halogen-free, LABS-free

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
W.			2 m, 4-wire	DOL-1204-G02MRN	6058291	•	•	•	•
	Female connector,	Cable, open conduc-	5 m, 4-wire	DOL-1204-G05MRN	6058476	•	•	•	•
6	M12, 4-pin, straight, unshielded	tor heads	10 m, 4-wire	DOL-1204-G10MRN	6058478	•	•	•	•
			25 m, 4-wire	DOL-1204-G25MRN	6058480	•	•	•	•
	Female connector, M12, 4-pin, angled,	Cable, open conductor heads	2 m, 4-wire	DOL-1204-L02MRN	6058482	•	•	•	•
			5 m, 4-wire	DOL-1204-L05MRN	6058483	•	•	•	•
	with 3 LEDs, un- shielded		10 m, 4-wire	DOL-1204-L10MRN	6058484	•	•	•	•
	Snieided		25 m, 4-wire	DOL-1204-L25MRN	6058485	•	•	•	•
_			2 m, 4-wire	DOL-1204-W02MRN	6058474	•	•	•	•
	Female connector,	Cable, open conduc-	5 m, 4-wire	DOL-1204-W05MRN	6058477	•	•	•	•
	M12, 4-pin, angled, unshielded	tor heads	10 m, 4-wire	DOL-1204-W10MRN	6058479	•	•	•	•
	anomorada	unsmerueu	25 m, 4-wire	DOL-1204-W25MRN	6058481	•	•	•	•

Connecting cables with female connector M12, 4-pin, PUR, halogen-free, Oil / grease resistant

- Cable material: PUR, halogen-free
- Connector material: TPU
- Ambient operating temperature: -40 °C ... +80 °C, stationary position; -25 °C ... +80 °C, flexible use
- Locking nut material: zinc die-cast, nickel-plated

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
			2 m, 4-wire	DOL-1204-G02MC	6025900	•	•	•	•
			5 m, 4-wire	DOL-1204-G05MC	6025901	•	•	•	•
	Female connector,	Cable, open conduc-	10 m, 4-wire	DOL-1204-G10MC	6025902	•	•	•	•
No.	M12, 4-pin, straight, unshielded	tor heads	15 m, 4-wire	DOL-1204-G15MC	6034749	•	•	•	•
			20 m, 4-wire	DOL-1204-G20MC	6034750	•	•	•	•
			25 m, 4-wire	DOL-1204-G25MC	6034751	•	•	•	•
	Female connector, M12, 4-pin, angled, with 3 LEDs, un-		2 m, 4-wire	DOL-1204-L02MC	6039086	•	•	•	•
			5 m, 4-wire	DOL-1204-L05MC	6020398	•	•	•	•
CIN	shielded	tor modus	10 m, 4-wire	DOL-1204-L10MC	6039088	•	•	•	•
			2 m, 4-wire	DOL-1204-W02MC	6025903	•	•	•	•
			5 m, 4-wire	DOL-1204-W05MC	6025904	•	•	•	•
	Female connector, M12, 4-pin, angled,	Cable, open conduc-	10 m, 4-wire	DOL-1204-W10MC	6025905	•	•	•	•
3	unshielded	tor heads	15 m, 4-wire	DOL-1204-W15MC	6034752	•	•	•	•
			20 m, 4-wire	DOL-1204-W20MC	6034753	•	•	•	•
			25 m, 4-wire	DOL-1204-W25MC	6034754	•	•	•	•

Connecting cables with male connector M12, 4-pin, PUR, halogen-free, Oil / grease resistant

- Cable material: PUR, halogen-free
- Connector material: TPU
- Ambient operating temperature: -40 °C ... +80 °C, stationary position; -5 °C ... +80 °C, flexible use
- · Locking nut material: zinc die-cast, nickel-plated

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
_			2 m, 4-wire	STL-1204-G02MC	6028077	•	•	•	•
No.	Male connector, M12, 4-pin, straight, unshielded	Cable, open conductor heads	5 m, 4-wire	STL-1204-G05MC	6048170	•	•	•	•
			10 m, 4-wire	STL-1204-G10MC	6041750	•	•	•	•
			15 m, 4-wire	STL-1204-G15MC	6048171	•	•	•	•
	Male connector,	Cable, open conduc-	5 m, 4-wire	STL-1204-W05MC	6037472	•	•	•	•
<b>8</b>	M12, 4-pin, angled, unshielded	tor heads	15 m, 4-wire	STL-1204-W15MC	6037473	•	•	•	•

Connection cables with female connector and male connector M8, 3-pin, PUR, halogen-free, Oil / grease resistant

- Cable material: PUR, halogen-free
- Connector material: TPU
- Ambient operating temperature: -40 °C ... +80 °C, stationary position; -25 °C ... +80 °C, flexible use
- Locking nut material: zinc die-cast, nickel-plated

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30	
	Female connector, M8, 3-pin, straight, unshielded	Male connector MX	1 m, 3-wire	DSL-0803-G01MC	6029405	•	-	-	-	
				2 m, 3-wire	DSL-0803-G02MC	6029406	•	-	-	-
			3 m, 3-wire	DSL-0803-G03MC	6037696	•	-	-	-	
N. F.			5 m, 3-wire	DSL-0803-G05MC	6032730	•	-	-	-	
			10 m, 3-wire	DSL-0803-G10MC	6032731	•	-	-	-	
			20 m, 3-wire	DSL-0803-G20MC	6035805	•	-	-	-	

Connection cables with female connector and male connector M12, 4-pin, PP, hygienic systems

- Cable material: PP
- Connector material: PP
- Ambient operating temperature: -40 °C ... +105 °C, stationary position; -25 °C ... +105 °C, flexible use
- Locking nut material: stainless steel (V4A/1.4404)
- **Description:** Tested detergent: P3-topactive DES, P3-topactive 200, P3-topax 52, P3-topax 66 und P3-topax 91, Silicone-free, halogen-free, LABS-free

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
	Female connector,	Male connector, M12,	2 m, 4-wire	DSL-1204-B02MRN	6058502	•	•	•	•
6	M12, 4-pin, angled, unshielded	4-pin, straight	5 m, 4-wire	DSL-1204-B05MRN	6058503	•	•	•	•
	Female connector, M12, 4-pin, straight, unshielded	Male connector, M12, 4-pin, straight	2 m, 4-wire	DSL-1204-G02MRN	6058499	•	•	•	•
N			5 m, 4-wire	DSL-1204-G05MRN	6058500	•	•	•	•

Connection cables with female connector and male connector M12, 4-pin, PUR, halogen-free, Oil / grease resistant

- Cable material: PUR, halogen-free
- Connector material: TPU
- Ambient operating temperature: -40 °C ... +80 °C, stationary position; -25 °C ... +80 °C, flexible use
- Locking nut material: zinc die-cast, nickel-plated

Figure	Connection type head A	Connection type head B	Connecting cable	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
	Female connector,	Male connector, M12,	5 m, 4-wire	DSL-1204-G05MC	6033245	•	•	•	•
4.40	M12, 4-pin, straight, unshielded	4-pin, straight	10 m, 4-wire	DSL-1204-G10MC	6033698	•	•	•	•

Female connectors (ready to assemble) M12, 4-pin, hygienic systems

• Locking nut material: stainless steel (V4A/1.4404/316L)

Figure	Connection type head A	Connection type head B	Connector material	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
To .	Female connector, M12, 4-pin, straight, unshielded	Screw-type terminals	PA	DOS-1204-GN	6028357	•	•	•	•
	Female connector, M12, 4-pin, angled, unshielded	Screw-type terminals	PBT	DOS-1204-WN	6028358	•	•	•	•

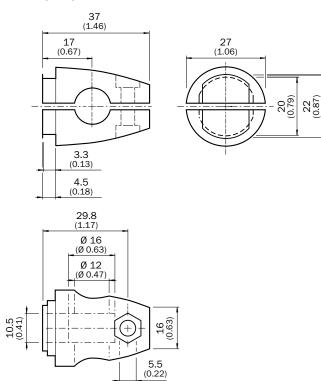
Male connectors (ready to assemble) M12, 4-pin, hygienic systems

• Locking nut material: stainless steel (V4A/1.4404)

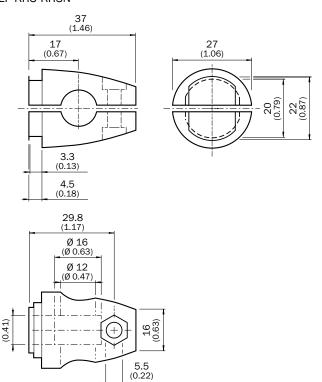
Figure	Connection type head A	Connection type head B	Connector material	Туре	Part no.	IMB08	IMB12	IMB18	IMB30
	Male connector, M12, 4-pin, straight, unshielded		PA	STE-1204-GN	6028359	•	•	•	•
		Screw-type terminals	PBT	STE-1204-TN	6028360	•	•	•	•

# Dimensional drawings Mounting systems

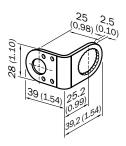
#### BEF-KHS-KH3



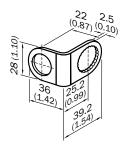
#### BEF-KHS-KH3N



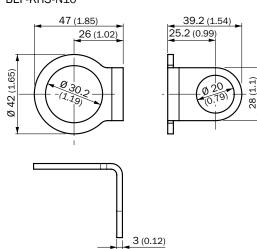
# BEF-KHS-N05 / BEF-KHS-N05N



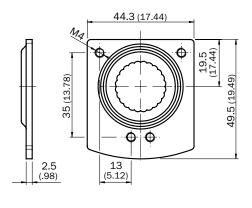
# BEF-KHS-N06 / BEF-KHS-N06N



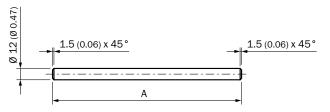
#### BEF-KHS-N10



#### BEF-KHS-N11N

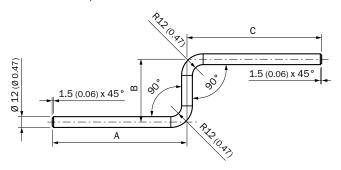


#### BEF-MS12G-(N)A / BEF-MS12G-(N)B



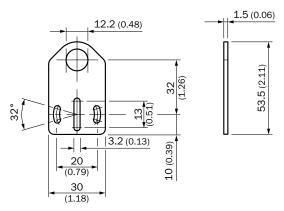
- ① BEF-MS12G-(N)A: A = 200 mm
- ② BEF-MS12G-(N)B: A = 300 mm

#### BEF-MS12Z-NA / BEF-MS12Z-NB

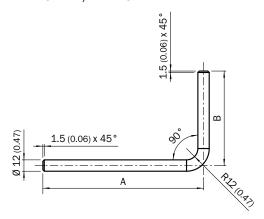


- ① BEF-MS12Z-(N)A: A = 150 mm, B = 70 mm, C = 150 mm
- ② BEF-MS12Z-(N)B: A = 150 mm, B = 70 mm, C = 250 mm

# BEF-WG-M12 / BEF-WG-M12N

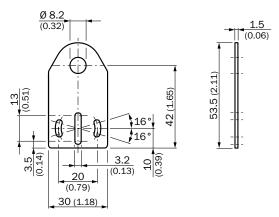


#### BEF-MS12L-A / BEF-MS12L-B

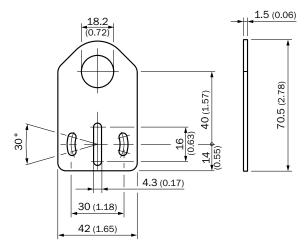


- ① BEF-MS12L-(N)A: A = 200 mm, B = 150 mm
- ② BEF-MS12L-(N)B: A = 250 mm, B = 250 mm

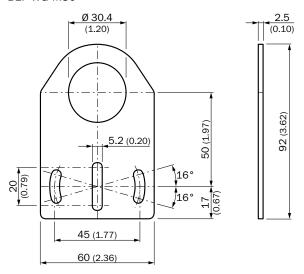
#### BEF-WG-M08



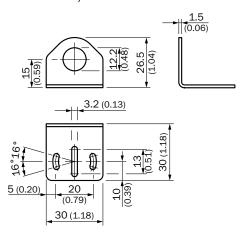
# BEF-WG-M18 / BEF-WG-M18N



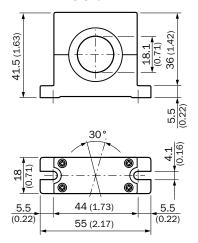
#### BEF-WG-M30



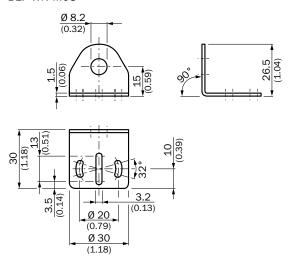
#### BEF-WN-M12 / BEF-WN-M12N



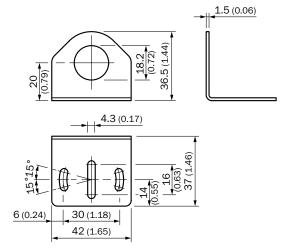
#### BEF-WN-M18-ST02



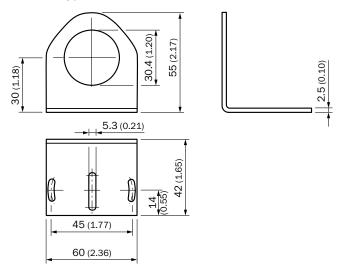
#### BEF-WN-M08



#### BEF-WN-M18 / BEF-WN-M18N

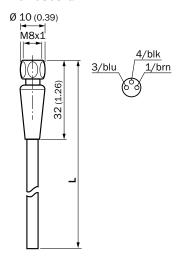


#### BEF-WN-M30

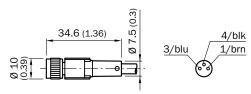


# Dimensional drawings Connection systems

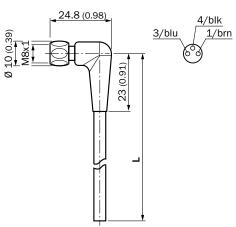
#### DOL-0803-GxxMRN



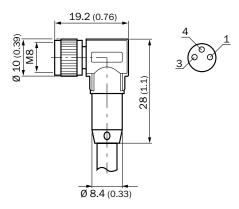
DOL-0803-GxxMC



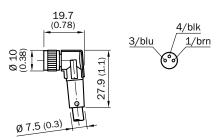
# DOL-0803-L02MRN, DOL-0803-L05MRN , DOL-0803-L10M-RN, DOL-0803-W02MRN, DOL-0803-W10MRN



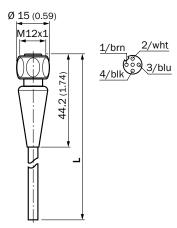
DOL-0803-L02MC DOL-0803-L10MC



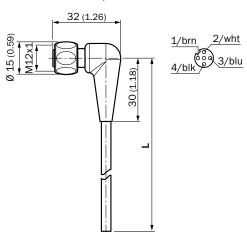
#### DOL-0803-WxxMC



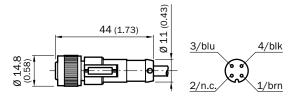
#### DOL-1204-G0xxRN



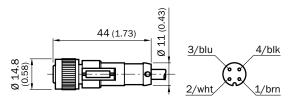
#### DOL-1204-LxxMRN, DOL-1204-WxxMRN



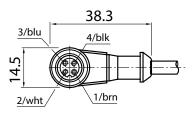
#### DOL-1204-GxxMC

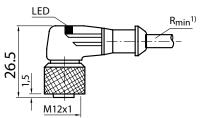


DOL-1204-GxxMC

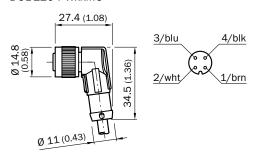


DOL-1204-LxxMC

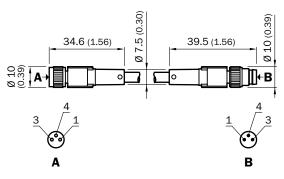




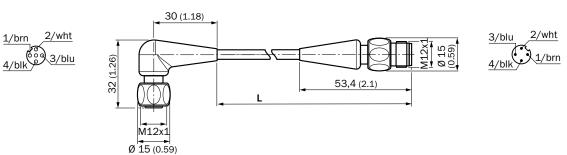
DOL-1204-WxxMC



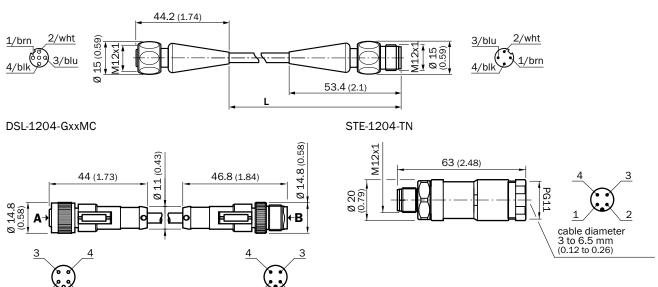
DSL-0803-GxxMC



DSL-1204-BxxMRN



#### DSL-1204-GxxMRN



# REGISTER AT WWW.SICK.COM TODAY AND ENJOY ALL THE BENEFITS

- Select products, accessories, documentation and software quickly and easily.
- Create, save and share personalized wish lists.
- View the net price and date of delivery for every product.
- Requests for quotation, ordering and delivery tracking made easy.
- Overview of all quotations and orders.
- Direct ordering: submit even very complex orders in moments.
- View the status of quotations and orders at any time.

  Receive e-mail notifications of status changes.
- Easily repeat previous orders.
- Conveniently export quotations and orders to work with your systems.



# SERVICES FOR MACHINES AND SYSTEMS: SICK LifeTime Services

Our comprehensive and versatile LifeTime Services are the perfect addition to the comprehensive range of products from SICK. The services range from product-independent consulting to traditional product services.





Consulting and design Safe and professional



Product and system support Reliable, fast and on-site



Verification and optimization Safe and regularly inspected



Upgrade and retrofits
Easy, safe and economical



Training and education
Practical, focused and professional

# SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With almost 7,000 employees and over 50 subsidiaries and equity investments as well as numerous representative offices worldwide, we are always close to our customers. 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 various 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 round out 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:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and additional representatives → www.sick.com

