



IMF

THE ECONOMIC STANDARD FOR USE
IN THE FOOD INDUSTRY

Inductive Proximity Sensors

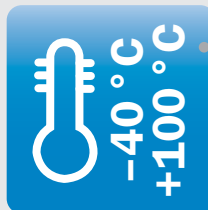
SICK
Sensor Intelligence.



Achieving reliable results even under difficult conditions is particularly important in food production and processing applications, chiefly because the standard requirements of process and factory automation must be taken into account. While the use of rugged materials and the capacity for thorough cleaning are the main priorities for process automation, high levels of accuracy, rapid response times, straightforward commissioning, and the option to run diagnostics on sensors remotely are key factors within factory automation.

Protected against water

- IP 68 and IP 69K enclosure rating due to sealing concept



Wide temperature range

- Digital temperature compensation with SICK-ASIC technology

Mechanically rugged

- High tightening torque and strength due to stainless steel housing



Safe food production

- Use of FDA-conform materials

Resistant against cleaning agents

- ECOLAB-certified resistance to all common cleaning agents

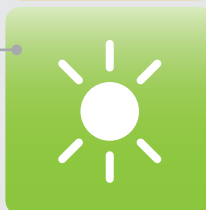


Corrosion resistant

- Long-lasting due to 316L stainless steel housing

Visual installation aid

- LED indicates when the secured sensing range has been reached



IO-Link compatible

- Option of communicating via IO-Link 1.0

LOW MAINTANANCE IN WASHDOWN ENVIRONMENTS

The IMF inductive proximity sensor covers all options by delivering maximum automation performance while also complying with the demands of the food industry. Extended, highly accurate sensing ranges mean that reliable switching behavior is guaranteed, even in the event of dramatic changes in temperature. The materials used – including stainless steel and LCP – have been approved by the FDA and the sensor is certified by Ecolab. The IMF is extremely watertight, boasting enclosure ratings IP 68 and IP 69K, and the option of communication via IO-Link opens up new opportunities for configuration and diagnostics.

Determining positions in wet areas

In piping systems within automated plants, valve clusters provide a number of options for coupling pipes in different ways. Filling and emptying processes can be carried out without having to manually reconnect to coupling panels. Two IMF inductive proximity sensors detect the position of the globe valves.

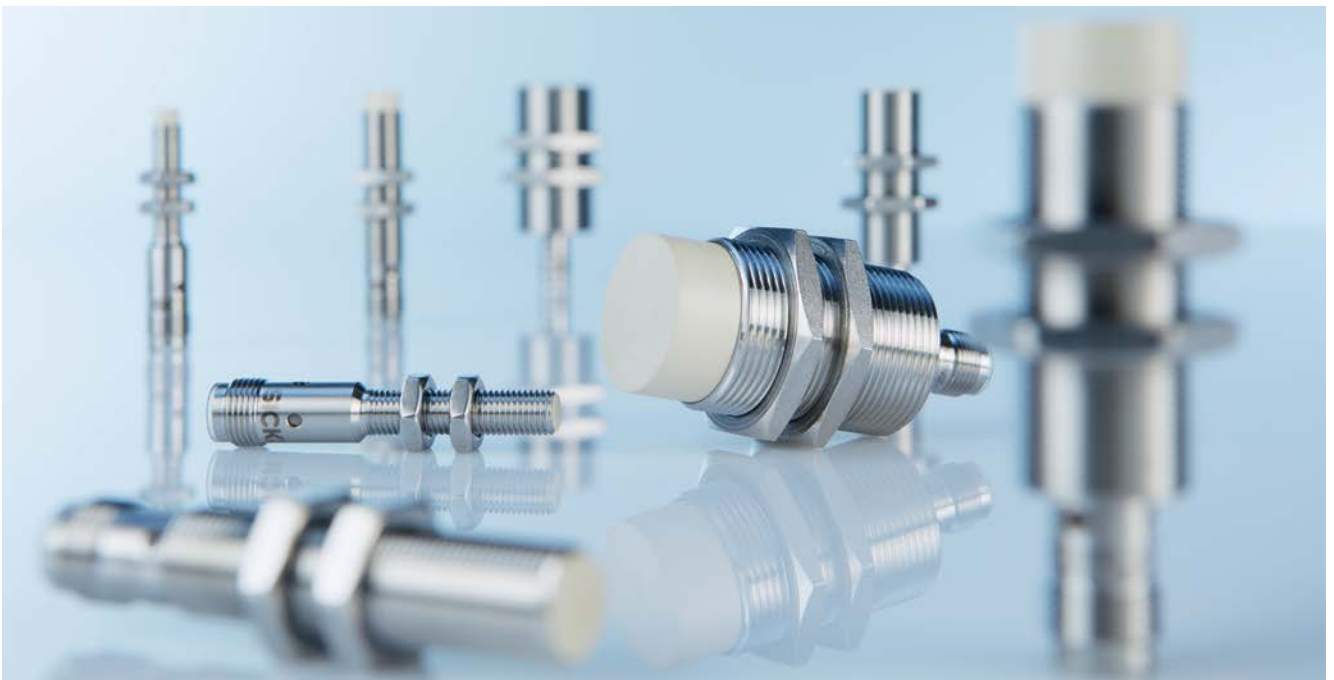


Coupling panels are used in storage tanks within the beverage industry to control the product flow, and they connect pipes together. The IMF inductive proximity sensor is used to detect the position of the coupling bend.

One popular method of fulfilling the strict hygiene standards that apply in this context is to clean the systems using high pressure on a daily basis – this means that the individual components are exposed to strong thermal and mechanical loads as well as chemically aggressive cleaning agents, which poses a real challenge to the sensors in place.



It is particularly important in the splash zone (cleaning zone/washdown) that wet cleaning can be completed quickly and effectively – and that there is very little, if any, residue (food, cleaning agents, or water) left on the surfaces during the cleaning process. It must therefore be ensured that sensors in the splash zone are rugged enough to be exposed to cleaning agents and high-pressure cleaning – no problem at all for the IMF.



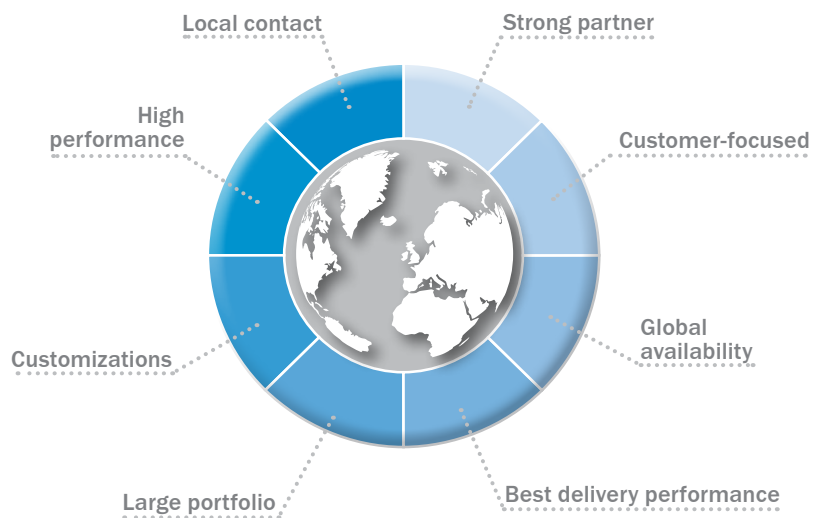
The IMF is available in sizes M8 to M30.

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 produc-

tion 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 IMF is available with the following sensing ranges:

Product	Sensing range (mm)	Page
M08 flush	2 mm	8
M08 non-flush	4 mm	8
M12 flush	4 mm	12
M12 non-flush	8 mm	12
M18 flush	8 mm	16
M18 non-flush	12 mm	16
M30 flush	15 mm	20
M30 non-flush	20 mm	20

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Product description

The IMF inductive proximity sensor is the new standard for reliability in the food industry. With its extended sensing ranges, made highly precise thanks to the use of SICK ASIC technology, the IMF ensures reliable, stable processes. What's more, its wide-ranging specification limits allow the IMF to be used in all areas of food production: a huge benefit when it comes to product selection and

warehousing. The visual adjustment indicator saves time during commissioning and helps 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

- Types M8
- Extended sensing ranges: 2 mm ... 4 mm
- Electrical configuration: DC 3- and 4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C ... 100 °C
- FDA-approved stainless steel housing (V4A) and active sensing face made of plastic (LCP)
- Visual adjustment indicator, IO-Link-ready
- Resistant to industrial cleaning agents, Ecolab-certified

Your benefits

- Stable processes thanks to extended, highly precise sensing ranges enabled through the use of SICK ASIC technology
- Reduced machine downtimes thanks to a longer service life, even when subjected to frequent cleaning cycles
- Quick and easy installation thanks to the visual adjustment indicator
- High degree of flexibility and communication options thanks to IO-Link
- Easy to implement customer-specific variants thanks to a modular concept



Additional information

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→ www.mysick.com/en/IMF08

For more information, simply 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

	Flush	Non-flush
Housing	Cylindrical	
Thread size	M8 x 1	
Sensing range S_n	2 mm	4 mm
Safe sensing range S_a	1.62 mm	3.24 mm
Installation type	Flush	Non-flush
Switching frequency	4,000 Hz	
Output type	PNP / NPN (depending on type)	
Output function	NO / NC / Complementary (depending on type)	
Electrical wiring	DC 3-wire / DC 4-wire (depending on type)	
Enclosure rating	IP 68 ¹⁾ IP 69K ²⁾	
Special features	Suitable for use in the food industry, Resistant to cleaning agents Capable of communication via IO-Link 1.0	

¹⁾ According to EN 60529.

²⁾ According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2 V
Current consumption ²⁾	≤ 10 mA
Hysteresis	3 % ... 20 %
Repeatability ^{3) 4)}	≤ 2 %
Temperature drift (of S_n)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
Connection type ⁵⁾	Male connector, M12
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	100 g / 11 ms / 1000 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz, 1 mm / 55 z ... 500 Hz / 15 g
Ambient operating temperature	-40 °C ... +100 °C
Housing material	V4A (1.4404, AISI 316L)
Sensing face material	Plastic, LCP (FDA certified)
Tightening torque, max. ⁶⁾	Typ. 14 Nm

¹⁾ At I_a max.

²⁾ Without load.

³⁾ U_b and T_a constant.

⁴⁾ Of S_r .

⁵⁾ With gold plated contact pins.

⁶⁾ Valid if toothed side of nut is used.

Reduction factors

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

Ordering information

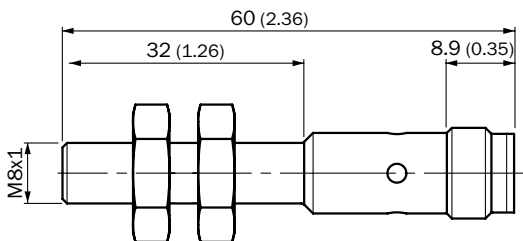
Other models → www.mysick.com/en/IMF08

- **Connection:** male connector, M12, 4-pin

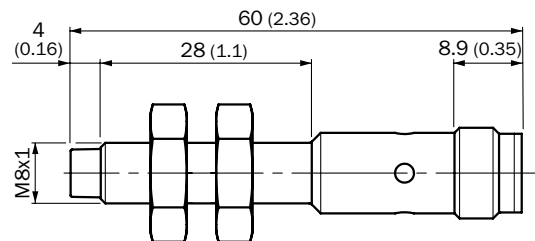
Installation type	Sensing range S_n	Electrical wiring	Output type	Output function	IO-Link	Connection diagram	Type	Part no.
Flush	≤ 2 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF08-02BNSNCOS	1076749
			PNP	NC	-	Cd-008	IMF08-02BPONCOS	1076747
		DC 4-wire	PNP	NO	✓	Cd-007	IMF08-02BPSNCOS	1076745
			PNP	Complementary	✓	Cd-006	IMF08-02BPPNCOS	1076748
Non-flush	≤ 4 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF08-04NNSNCOS	1076753
			PNP	NC	-	Cd-008	IMF08-04NPONCOS	1076751
		DC 4-wire	PNP	NO	✓	Cd-007	IMF08-04NPSNCOS	1076750
			PNP	Complementary	✓	Cd-006	IMF08-04NPPNCOS	1076752

Dimensional drawings (Dimensions in mm (inch))

IMF08, flush

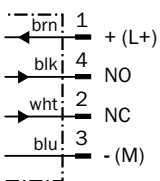


IMF08, non flush

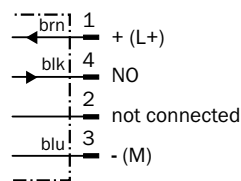


Connection diagram

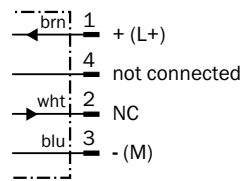
Cd-006



Cd-007

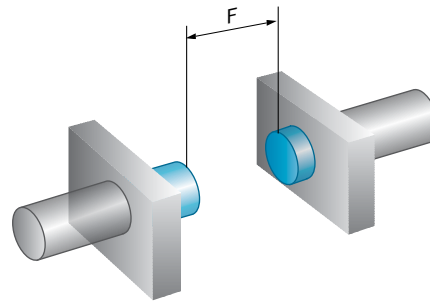
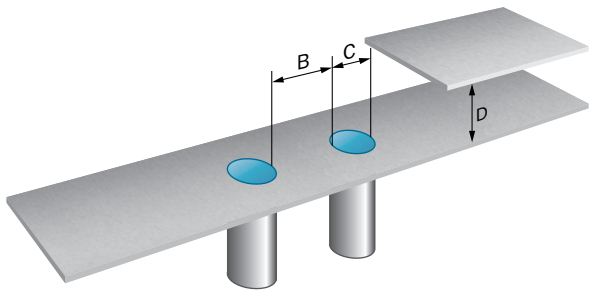


Cd-008

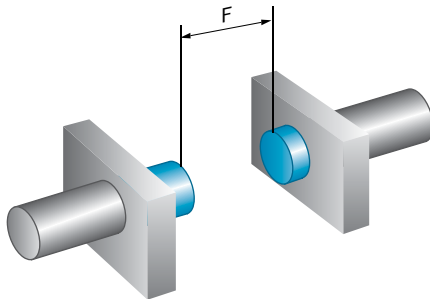
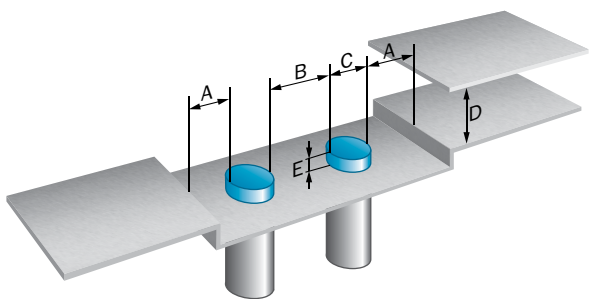


Installation note

Flush installation



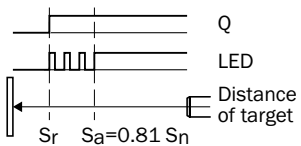
Non-flush installation



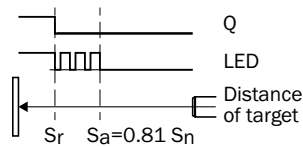
	Installation type	Sensing range S_n	A	B	C	D	E	F
IMF08-02Bxxxxxx	Flush	2 mm	-	6.5 mm	8 mm	6 mm	-	16 mm
IMF08-04Nxxxxxx	Non-flush	4 mm	8 mm	18 mm	8 mm	12 mm	8 mm	32 mm

Installation aid

Normally open



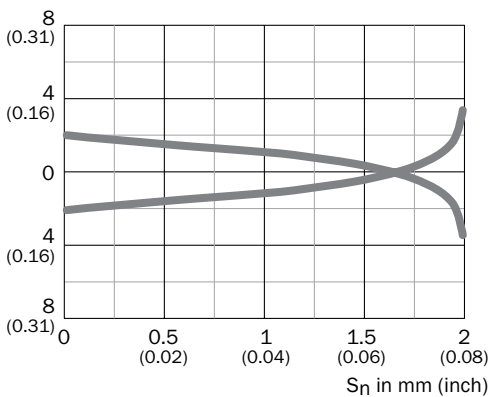
Normally closed



Response curve

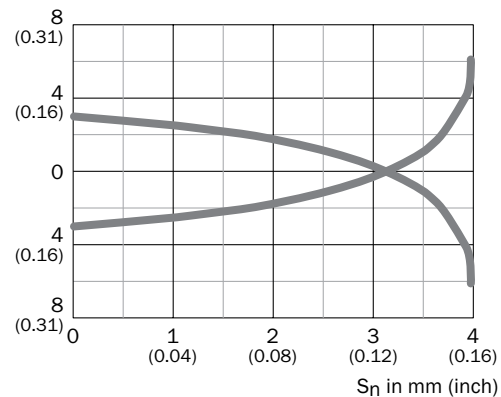
Flush installation

Distance in mm (inch)



Non-flush installation

Distance in mm (inch)



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At a glance

- Types M12
- Extended sensing ranges: 4 mm ... 8 mm
- Electrical configuration: DC 3- and 4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C ... 100 °C
- FDA-approved stainless steel housing (V4A) and active sensing face made of plastic (LCP)
- Visual adjustment indicator, IO-Link-ready
- Resistant to industrial cleaning agents, Ecolab-certified

Your benefits

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- Reduced machine downtimes thanks to a longer service life, even when subjected to frequent cleaning cycles
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→ www.mysick.com/en/IMF12

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Detailed technical data

Features

	Flush	Non-flush
Housing	Cylindrical	
Thread size	M12 x 1	
Sensing range S_n	4 mm	8 mm
Safe sensing range S_a	3.24 mm	6.48 mm
Installation type	Flush	Non-flush
Switching frequency	2,000 Hz	
Output type	PNP / NPN (depending on type)	
Output function	NO / NC / Complementary (depending on type)	
Electrical wiring	DC 3-wire / DC 4-wire (depending on type)	
Enclosure rating	IP 68 ¹⁾ IP 69K ²⁾	
Special features	Suitable for use in the food industry, Resistant to cleaning agents Capable of communication via IO-Link 1.0	

¹⁾ According to EN 60529.

²⁾ According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2 V
Current consumption ²⁾	≤ 10 mA
Hysteresis	3 % ... 20 %
Repeatability ^{3) 4)}	≤ 2 %
Temperature drift (of S_n)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
Connection type ⁵⁾	Male connector, M12
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	100 g / 2 ms / 500 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz / 1 mm; 55 Hz ... 500 Hz / 60 g
Ambient operating temperature	-40 °C ... +100 °C
Housing material	V4A (1.4404, AISI 316L)
Sensing face material	Plastic, LCP (FDA certified)
Tightening torque, max. ⁶⁾	Typ. 32 Nm
Protection class ⁷⁾	II

¹⁾ At I_a max.

²⁾ Without load.

³⁾ U_b and T_a constant.

⁴⁾ Of S_r .

⁵⁾ With gold plated contact pins.

⁶⁾ Valid if toothed side of nut is used.

⁷⁾ Reference voltage DC 50 V.

Reduction factors

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

Ordering information

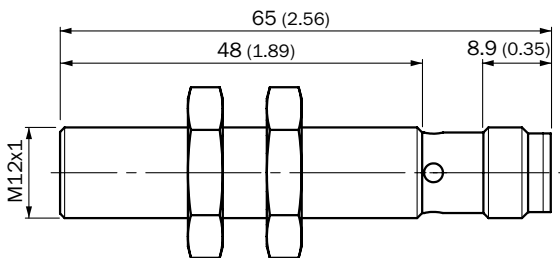
Other models → www.mysick.com/en/IMF12

- **Connection:** male connector, M12, 4-pin

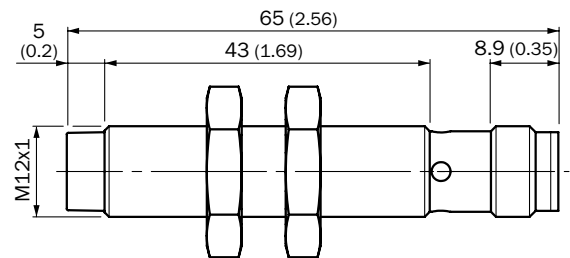
Installation type	Sensing range S_n	Electrical wiring	Output type	Output function	IO-Link	Connection diagram	Type	Part no.
Flush	≤ 4 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF12-04BNSNCOS	1076671
			PNP	NC	-	Cd-008	IMF12-04BPONCOS	1076670
		DC 4-wire	PNP	NO	✓	Cd-007	IMF12-04BPSNCOS	1076673
			PNP	Complementary	✓	Cd-006	IMF12-04BPPNCOS	1076674
Non-flush	≤ 8 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF12-08NNSNCOS	1076677
			PNP	NC	-	Cd-008	IMF12-08NPONCOS	1076676
		DC 4-wire	PNP	NO	✓	Cd-007	IMF12-08NPSNCOS	1076675
			PNP	Complementary	-	Cd-006	IMF12-08NPPNCOS	1076678

Dimensional drawings (Dimensions in mm (inch))

IMF12, flush

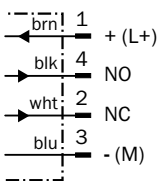


IMF12, non flush

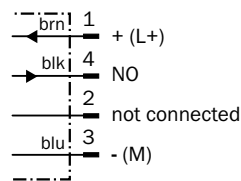


Connection diagram

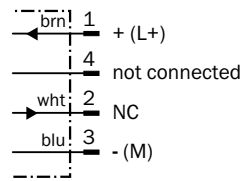
Cd-006



Cd-007

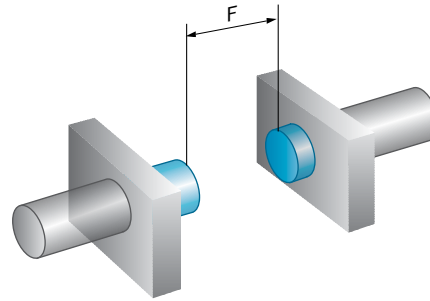
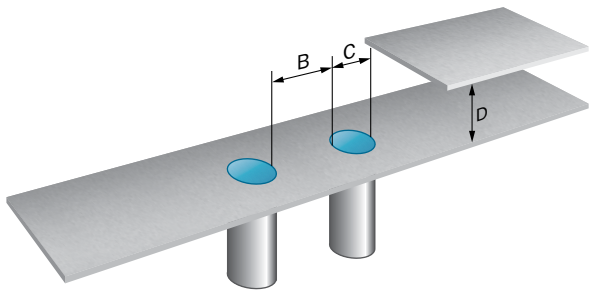


Cd-008

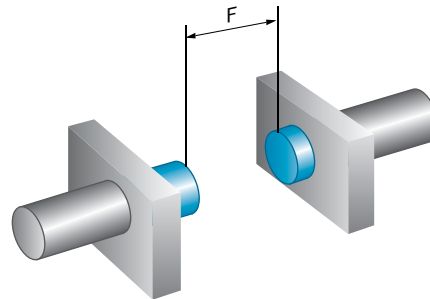
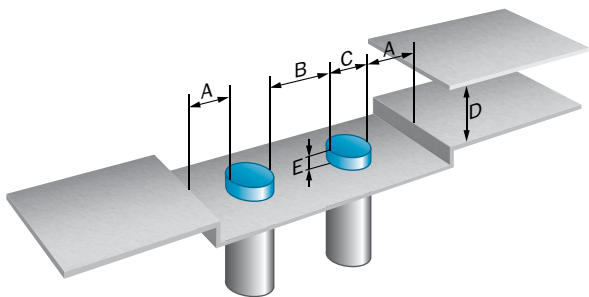


Installation note

Flush installation



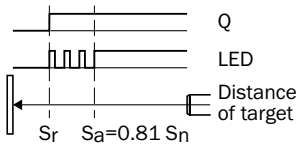
Non-flush installation



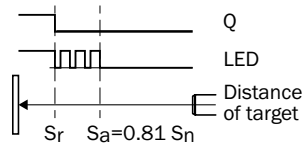
	Installation type	Sensing range S_n	A	B	C	D	E	F
IMF12-04Bxxxxxx	Flush	4 mm	-	12 mm	12 mm	12 mm	-	32 mm
IMF12-08Nxxxxxx	Non-flush	8 mm	12 mm	24 mm	12 mm	24 mm	16 mm	64 mm

Installation aid

Normally open



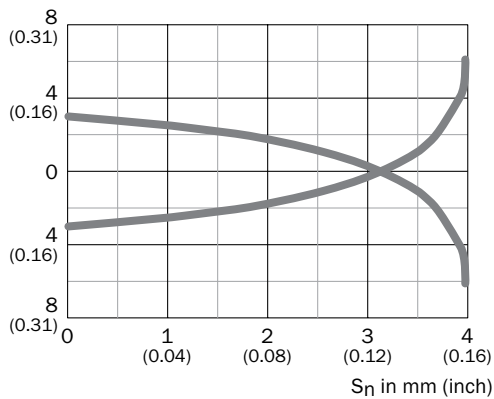
Normally closed



Response curve

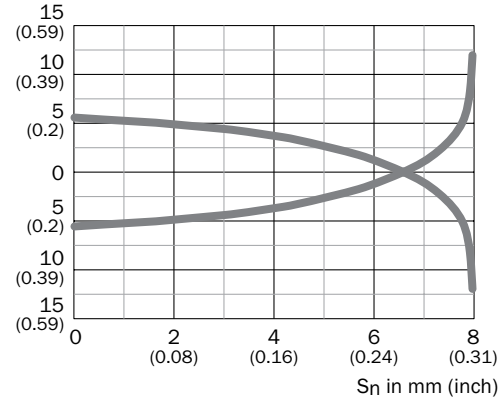
Flush installation

Distance in mm (inch)



Non-flush installation

Distance in mm (inch)



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warehousing. The visual adjustment indicator saves time during commissioning and helps 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

- Types M18
- Extended sensing ranges: 8 mm ... 12 mm
- Electrical configuration: DC 3- and 4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C ... 100 °C
- FDA-approved stainless steel housing (V4A) and active sensing face made of plastic (LCP)
- Visual adjustment indicator, IO-Link-ready
- Resistant to industrial cleaning agents, Ecolab-certified

Your benefits

- Stable processes thanks to extended, highly precise sensing ranges enabled through the use of SICK ASIC technology
- Reduced machine downtimes thanks to a longer service life, even when subjected to frequent cleaning cycles
- Quick and easy installation thanks to the visual adjustment indicator
- High degree of flexibility and communication options thanks to IO-Link
- Easy to implement customer-specific variants thanks to a modular concept



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→ www.mysick.com/en/IMF18

For more information, simply 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

	Flush	Non-flush
Housing	Cylindrical	
Thread size	M18 x 1	
Sensing range S_n	8 mm	12 mm
Safe sensing range S_a	6.48 mm	9.72 mm
Installation type	Flush	Non-flush
Switching frequency	1,000 Hz	
Output type	PNP / NPN (depending on type)	
Output function	NO / NC / Complementary (depending on type)	
Electrical wiring	DC 3-wire / DC 4-wire (depending on type)	
Enclosure rating	IP 68 ¹⁾ IP 69K ²⁾	
Special features	Suitable for use in the food industry, Resistant to cleaning agents Capable of communication via IO-Link 1.0	

¹⁾ According to EN 60529.

²⁾ According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2 V
Current consumption ²⁾	≤ 10 mA
Hysteresis	3 % ... 20 %
Repeatability ^{3) 4)}	≤ 2 %
Temperature drift (of S_n)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
Connection type ⁵⁾	Male connector, M12
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	100 g / 2 ms / 500 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz / 1 mm; 55 Hz ... 500 Hz / 60 g
Ambient operating temperature	-40 °C ... +100 °C
Housing material	V4A (1.4404, AISI 316L)
Sensing face material	Plastic, LCP (FDA certified)
Tightening torque, max. ⁶⁾	Typ. 90 Nm
Protection class ⁷⁾	II

¹⁾ At I_a max.

²⁾ Without load.

³⁾ U_b and T_a constant.

⁴⁾ Of S_r .

⁵⁾ With gold plated contact pins.

⁶⁾ Valid if toothed side of nut is used.

⁷⁾ Reference voltage DC 50 V.

Reduction factors

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

Ordering information

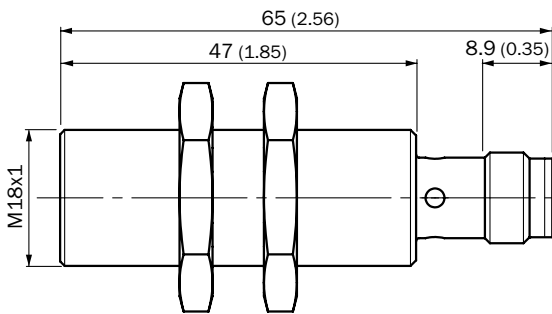
Other models → www.mysick.com/en/IMF18

- **Connection:** male connector, M12, 4-pin

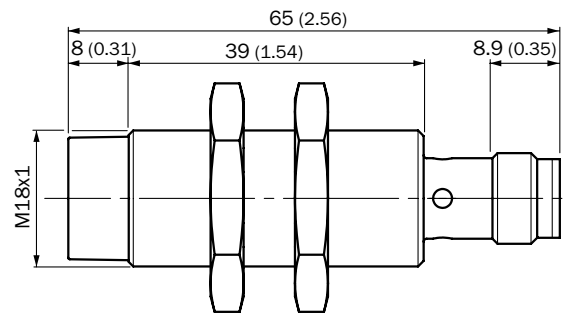
Installation type	Sensing range S_n	Electrical wiring	Output type	Output function	IO-Link	Connection diagram	Type	Part no.
Flush	≤ 8 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF18-08BNSNCOS	1076664
			PNP	NC	-	Cd-008	IMF18-08BPONCOS	1076663
		DC 4-wire	PNP	NO	✓	Cd-007	IMF18-08BPSNCOS	1076662
			PNP	Complementary	✓	Cd-006	IMF18-08BPPNCOS	1076665
Non-flush	≤ 12 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF18-12NNSNCOS	1076668
			PNP	NC	-	Cd-008	IMF18-12NPONCOS	1076667
		DC 4-wire	PNP	NO	✓	Cd-007	IMF18-12NPSNCOS	1076666
			PNP	Complementary	✓	Cd-006	IMF18-12NPPNCOS	1076669

Dimensional drawings (Dimensions in mm (inch))

IMF18, flush

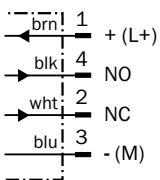


IMF18, non flush

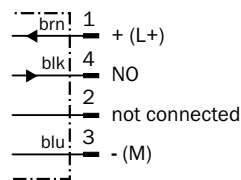


Connection diagram

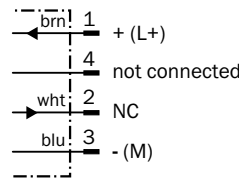
Cd-006



Cd-007

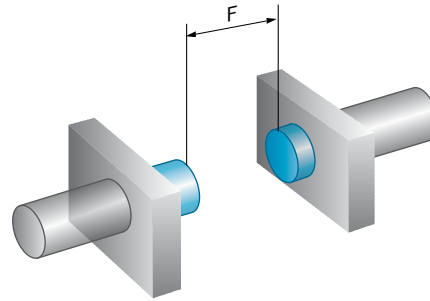
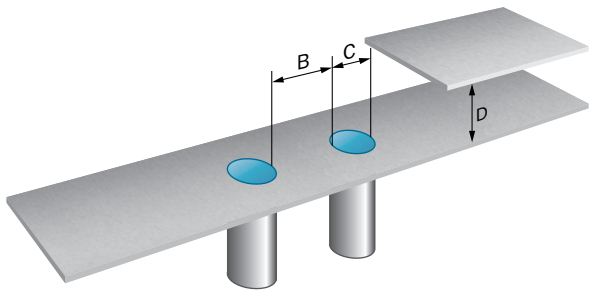


Cd-008

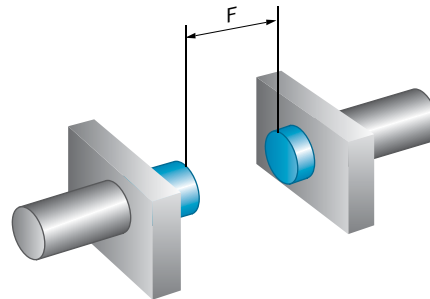
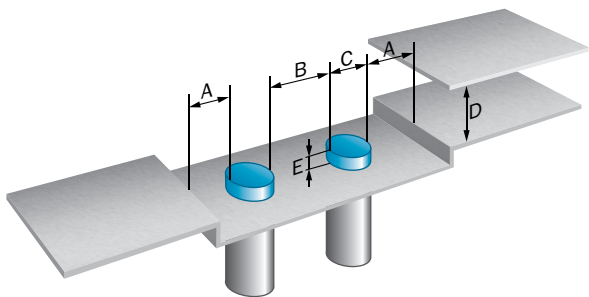


Installation note

Flush installation



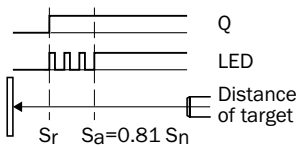
Non-flush installation



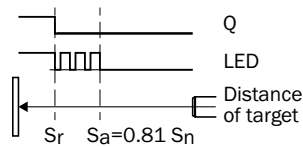
	Installation type	Sensing range S_n	A	B	C	D	E	F
IMF18-08Bxxxxxx	Flush	8 mm	9 mm	18 mm	18 mm	24 mm	2 mm	64 mm
IMF18-12Nxxxxxx	Non-flush	12 mm	18 mm	34 mm	18 mm	34 mm	12 mm	96 mm

Installation aid

Normally open

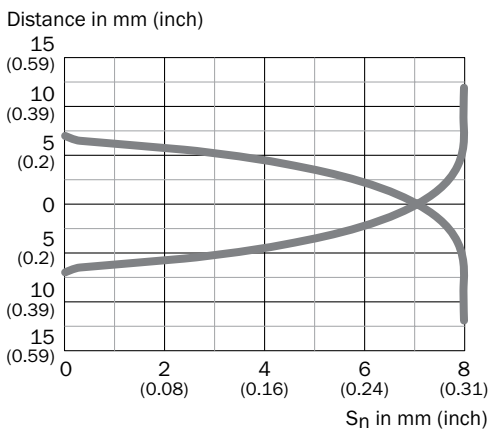


Normally closed

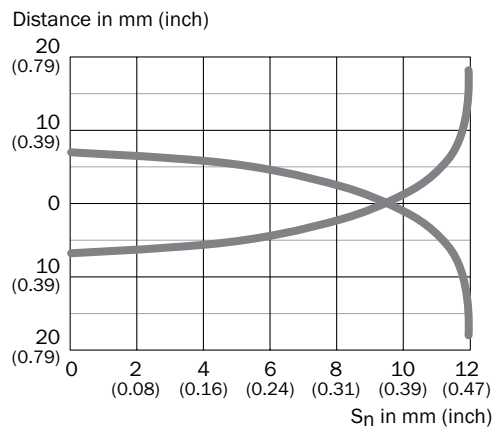


Response curve

Flush installation



Non-flush installation



THE ECONOMIC STANDARD FOR USE IN THE FOOD INDUSTRY



Product description

The IMF inductive proximity sensor is the new standard for reliability in the food industry. With its extended sensing ranges, made highly precise thanks to the use of SICK ASIC technology, the IMF ensures reliable, stable processes. What's more, its wide-ranging specification limits allow the IMF to be used in all areas of food production: a huge benefit when it comes to product selection and

warehousing. The visual adjustment indicator saves time during commissioning and helps 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

- Types M30
- Extended sensing ranges: 15 mm ... 20 mm
- Electrical configuration: DC 3- and 4-wire
- Enclosure rating: IP 68, IP 69K
- Temperature range: -40 °C ... 100 °C
- FDA-approved stainless steel housing (V4A) and active sensing face made of plastic (LCP)
- Visual adjustment indicator, IO-Link-ready
- Resistant to industrial cleaning agents, Ecolab-certified

Your benefits

- Stable processes thanks to extended, highly precise sensing ranges enabled through the use of SICK ASIC technology
- Reduced machine downtimes thanks to a longer service life, even when subjected to frequent cleaning cycles
- Quick and easy installation thanks to the visual adjustment indicator
- High degree of flexibility and communication options thanks to IO-Link
- Easy to implement customer-specific variants thanks to a modular concept



Additional information

Detailed technical data	19
Ordering information	20
Dimensional drawings	20
Connection diagram	20
Installation note	21
Installation aid	21
Response curve	21

→ www.mysick.com/en/IMF30

For more information, simply 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

	Flush	Non-flush
Housing	Cylindrical	
Thread size	M30 x 1.5	
Sensing range S_n	15 mm	20 mm
Safe sensing range S_a	12.15 mm	16.2 mm
Installation type	Flush	Non-flush
Switching frequency	500 Hz	
Output type	PNP / NPN (depending on type)	
Output function	NO / NC / Complementary (depending on type)	NC / NO / Complementary (depending on type)
Electrical wiring	DC 3-wire / DC 4-wire (depending on type)	
Enclosure rating	IP 68 ¹⁾ IP 69K ²⁾	
Special features	Suitable for use in the food industry, Resistant to cleaning agents Capable of communication via IO-Link 1.0	

¹⁾ According to EN 60529.

²⁾ According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2 V
Current consumption ²⁾	≤ 10 mA
Hysteresis	3 % ... 20 %
Repeatability ^{3) 4)}	≤ 2 %
Temperature drift (of S_n)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
Connection type ⁵⁾	Male connector, M12
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Power-up pulse	≤ 5 ms
Shock and vibration resistance	100 g / 2 ms / 500 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz / 1 mm; 55 Hz ... 500 Hz / 60 g
Ambient operating temperature	-40 °C ... +100 °C
Housing material	V4A (1.4404, AISI 316L)
Sensing face material	Plastic, LCP (FDA certified)
Tightening torque, max. ⁶⁾	Typ. 100 Nm
Protection class ⁷⁾	II

¹⁾ At I_a max.

²⁾ Without load.

³⁾ U_b and T_a constant.

⁴⁾ Of S_r .

⁵⁾ With gold plated contact pins.

⁶⁾ Valid if toothed side of nut is used.

⁷⁾ Reference voltage DC 50 V.

Reduction factors

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

Ordering information

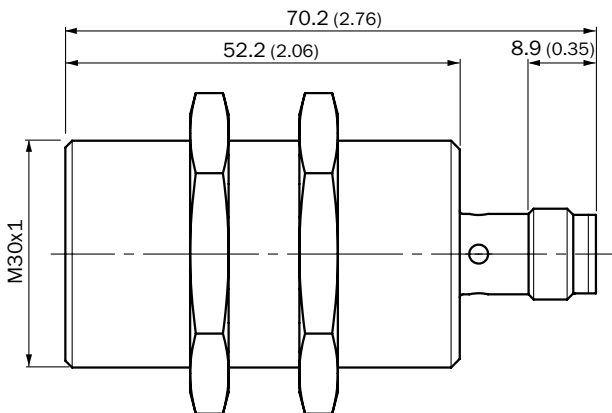
Other models → www.mysick.com/en/IMF30

- **Connection:** male connector, M12, 4-pin

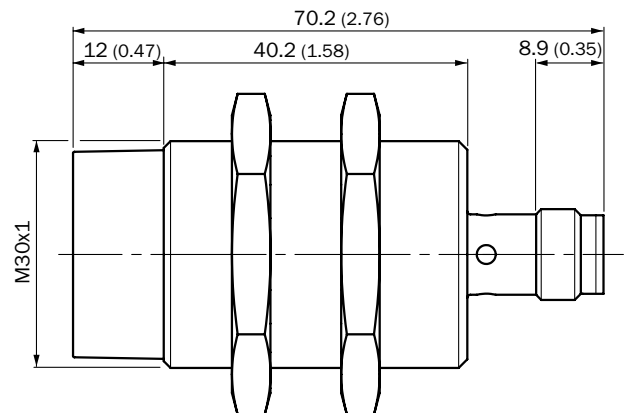
Installation type	Sensing range S_n	Electrical wiring	Output type	Output function	IO-Link	Connection diagram	Type	Part no.
Flush	≤ 15 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF30-15BNSNCOS	1076657
			PNP	NC	-	Cd-008	IMF30-15BPONCOS	1076654
		DC 4-wire	PNP	NO	✓	Cd-007	IMF30-15BPSNCOS	1076653
			PNP	Complementary	✓	Cd-006	IMF30-15BPPNCOS	1076656
Non-flush	≤ 20 mm	DC 3-wire	NPN	NO	-	Cd-007	IMF30-20NNSNCOS	1076661
			PNP	NC	-	Cd-008	IMF30-20NPONCOS	1076659
		DC 4-wire	PNP	NO	✓	Cd-007	IMF30-20NPSNCOS	1076658
			PNP	Complementary	✓	Cd-006	IMF30-20NPPNCOS	1076660

Dimensional drawings (Dimensions in mm (inch))

IMF30, flush

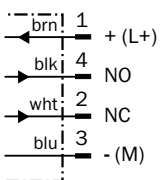


IMF30, non flush

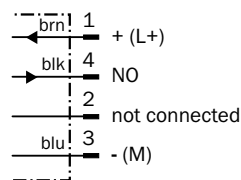


Connection diagram

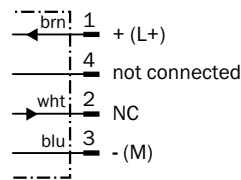
Cd-006



Cd-007

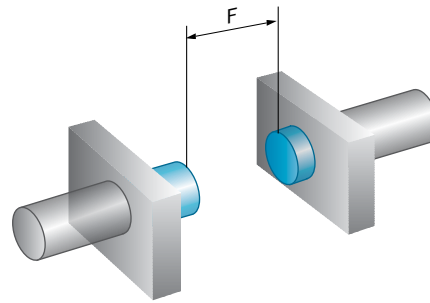
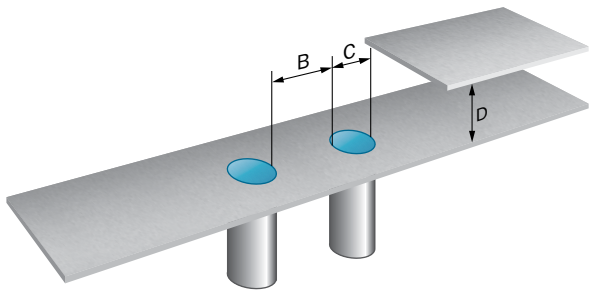


Cd-008

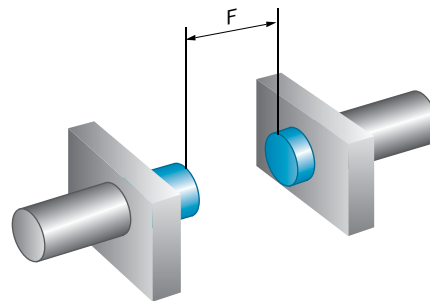
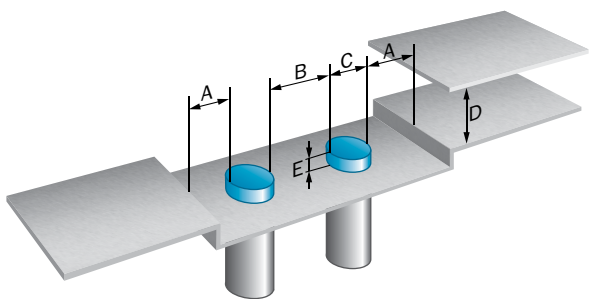


Installation note

Flush installation



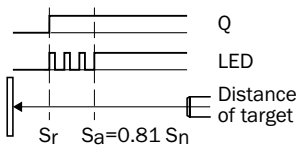
Non-flush installation



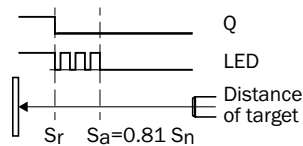
	Installation type	Sensing range S_n	A	B	C	D	E	F
IMF30-15Bxxxxxx	Flush	15 mm	-	40 mm	30 mm	45 mm	-	120 mm
IMF30-20Nxxxxxx	Non-flush	20 mm	20 mm	62 mm	30 mm	60 mm	20 mm	160 mm

Installation aid

Normally open

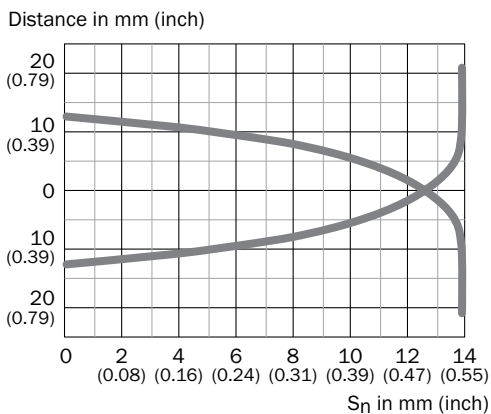


Normally closed

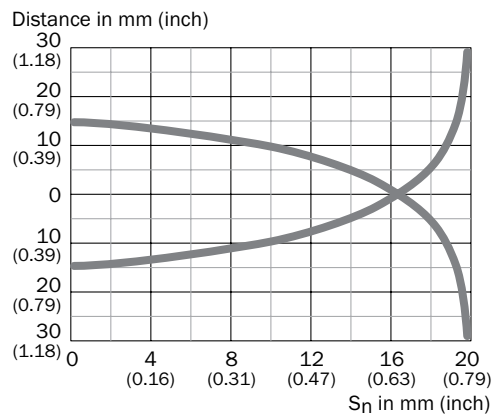


Response curve

Flush installation







Non-flush installation



Accessories

Mounting systems

Universal bar clamp systems

Figure	Description	Type	Part no.	IMF08	IMF12	IMF18	IMF30
	Universal bar clamp for mounting bars with 12 mm diameter	BEF-KHS-KH3	5322626	●	●	●	●
	Universal clamp bracket for mounting bars with 12 mm diameter	BEF-KHS-KH3N	5322627	●	●	●	●
	Plate N05 for universal clamp bracket, M12	BEF-KHS-N05	2051611	-	●	-	-
	Plate N05N for universal clamp bracket, M12	BEF-KHS-N05N	2051621	-	●	-	-
	Plate N06 for universal clamp bracket, M18	BEF-KHS-N06	2051612	-	-	●	-
	Plate N06N for universal clamp bracket, M18	BEF-KHS-N06N	2051622	-	-	●	-
	Plate N10 for universal clamp bracket, M30	BEF-KHS-N10	2062372	-	-	-	●
	Plate N11N for universal clamp bracket	BEF-KHS-N11N	2071081	●	●	●	●
	Mounting bar, straight, 200 mm, steel	BEF-MS12G-A	4056054	●	●	●	●
	Mounting bar, straight, 300 mm, steel	BEF-MS12G-B	4056055	●	●	●	●
	Mounting bar, straight, 200 mm, stainless steel	BEF-MS12G-NA	4058914	●	●	●	●
	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	●	●	●	●
	Mounting bar, L-shaped, 250 x 250 mm, steel	BEF-MS12L-B	4056053	●	●	●	●
	Mounting bar, Z-shaped, 150 mm x 70 mm x 150 mm, stainless steel	BEF-MS12Z-NA	4058916	●	●	●	●
	Mounting bar, Z-shaped, 150 mm x 70 mm x 250 mm, stainless steel	BEF-MS12Z-NB	4058917	●	●	●	●

Mounting brackets and mounting plates

Mounting brackets





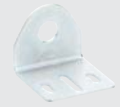
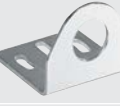






Figure	Description	Type	Part no.	IMF08	IMF12	IMF18	IMF30
	Mounting plate for M8 sensors	BEF-WG-M08	5321722	●	-	-	-
	Mounting plate for M12 sensors	BEF-WG-M12	5321869	-	●	-	-
	Mounting plate for M18 sensors	BEF-WG-M18	5321870	-	-	●	-
	Mounting plate for M30 sensors	BEF-WG-M30	5321871	-	-	-	●

Figure	Description	Type	Part no.	IMF08	IMF12	IMF18	IMF30
	Mounting bracket, M8 thread	BEF-WN-M08	5321721	●	-	-	-
	Mounting bracket, M12 thread	BEF-WN-M12	5308447	-	●	-	-
	Mounting bracket, M18 thread	BEF-WN-M18	5308446	-	-	●	-
	Mounting bracket, M30 thread	BEF-WN-M30	5308445	-	-	-	●

Mounting plates

Figure	Description	Type	Part no.	IMF08	IMF12	IMF18	IMF30
	Mounting plate for M12 housing	BEF-WG-M12N	5320950	-	●	-	-
	Mounting plate for M18 housing	BEF-WG-M18N	5320948	-	-	●	-
	Mounting bracket for M12 housing	BEF-WN-M12N	5320949	-	●	-	-
	Mounting bracket for M18 housing	BEF-WN-M18N	5320947	-	-	●	-

Terminal and alignment brackets




Alignment brackets

Figure	Description	Type	Part no.	IMF08	IMF12	IMF18	IMF30
	Mounting bracket with ball-and-socket	BEF-WN-M18-ST02	5312973	-	-	●	-




Connection systems

Plug connectors and cables



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

Figure	Connection type head A	Connection type head B	Connecting cable	Type	Part no.
	Female connector, M12, 4-pin, straight, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-G02MRN	6058291
			5 m, 4-wire	DOL-1204-G05MRN	6058476
			10 m, 4-wire	DOL-1204-G10MRN	6058478
	Female connector, M12, 4-pin, angled, with 3 LEDs, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-L02MRN	6058482
			5 m, 4-wire	DOL-1204-L05MRN	6058483
			10 m, 4-wire	DOL-1204-L10MRN	6058484
	Female connector, M12, 4-pin, angled, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-W02MRN	6058474
			5 m, 4-wire	DOL-1204-W05MRN	6058477
			10 m, 4-wire	DOL-1204-W10MRN	6058479


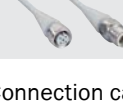
Connecting cables with female connector M12, 4-pin, PUR, halogen-free, Oil / grease resistant

Figure	Connection type head A	Connection type head B	Connecting cable	Type	Part no.
	Female connector, M12, 4-pin, straight, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-G02MC	6025900
			5 m, 4-wire	DOL-1204-G05MC	6025901
			10 m, 4-wire	DOL-1204-G10MC	6025902
	Female connector, M12, 4-pin, angled, with 3 LEDs, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-L02MC	6039086
			5 m, 4-wire	DOL-1204-L05MC	6020398
			10 m, 4-wire	DOL-1204-L10MC	6039088
	Female connector, M12, 4-pin, angled, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-W02MC	6025903
			5 m, 4-wire	DOL-1204-W05MC	6025904
			10 m, 4-wire	DOL-1204-W10MC	6025905


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

Figure	Connection type head A	Connection type head B	Connecting cable	Type	Part no.
	Male connector, M12, 4-pin, straight, unshielded	Cable, open conductor heads	2 m, 4-wire	STL-1204-G02MC	6028077
			5 m, 4-wire	STL-1204-G05MC	6048170
			10 m, 4-wire	STL-1204-G10MC	6041750
	Male connector, M12, 4-pin, angled, unshielded	Cable, open conductor heads	5 m, 4-wire	STL-1204-W05MC	6037472
			15 m, 4-wire	STL-1204-W15MC	6037473

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

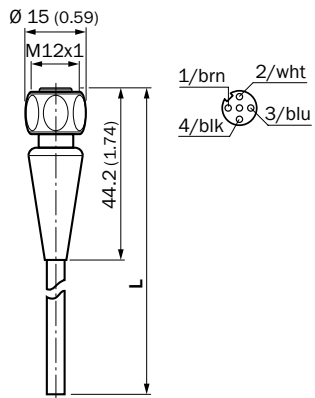
Figure	Connection type head A	Connection type head B	Connecting cable	Type	Part no.
	Female connector, M12, 4-pin, angled, unshielded	Male connector, M12, 4-pin, straight	2 m, 4-wire	DSL-1204-B02MRN	6058502
			5 m, 4-wire	DSL-1204-B05MRN	6058503
	Female connector, M12, 4-pin, straight, unshielded	Male connector, M12, 4-pin, straight	2 m, 4-wire	DSL-1204-G02MRN	6058499
			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

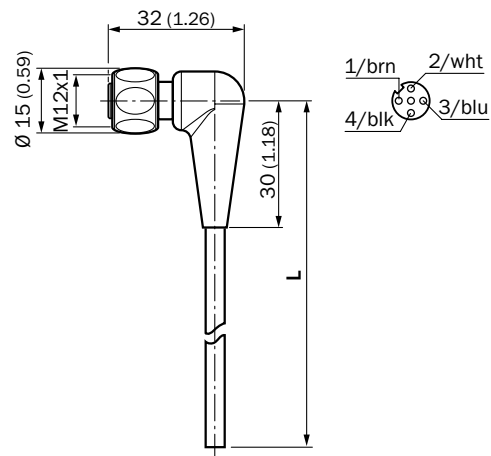
Figure	Connection type head A	Connection type head B	Connecting cable	Type	Part no.
	Female connector, M12, 4-pin, straight, unshielded	Male connector, M12, 4-pin, straight	5 m, 4-wire	DSL-1204-G05MC	6033245
			10 m, 4-wire	DSL-1204-G10MC	6033698

Dimensional drawings Connection systems

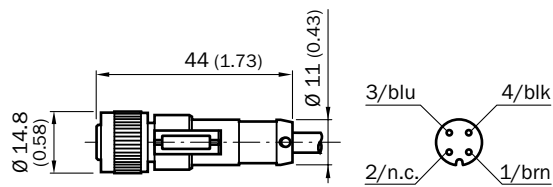
DOL-1204-GxxMRN



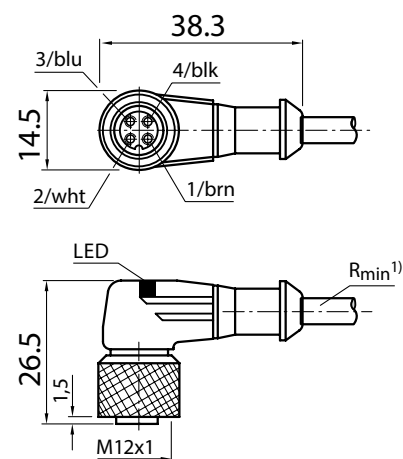
DOL-1204-LxxMRN, DOL-1204-WxxMRN



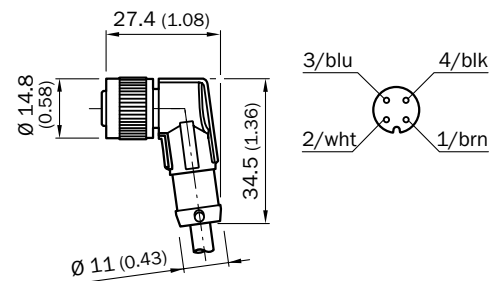
DOL-1204-GxxMC



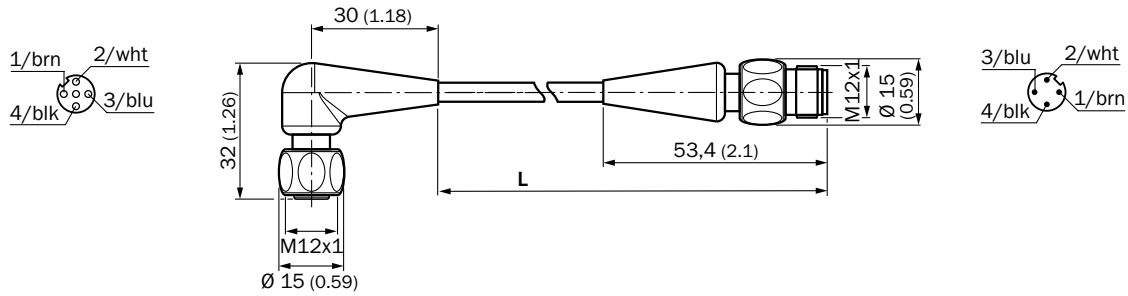
DOL-1204-L0xxMC



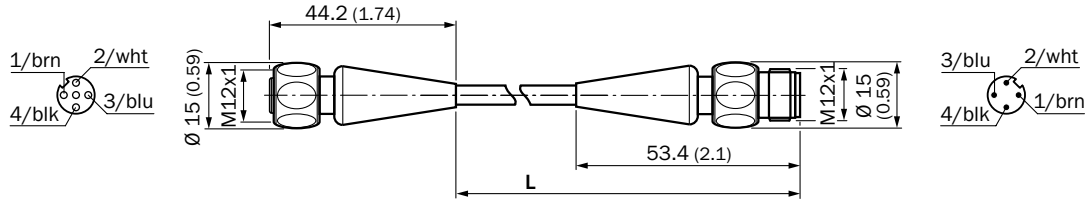
DOL-1204-WxxMC



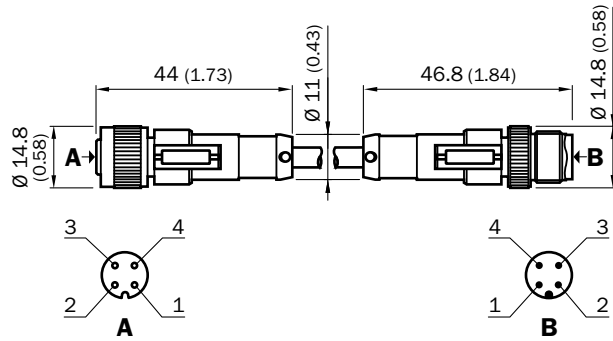
DSL-1204-B02MRN / DSL-1204-B05MRN



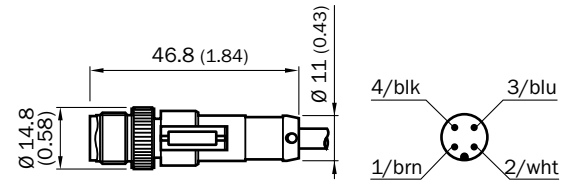
DSL-1204-G02MRN / DSL-1204-G05MRN



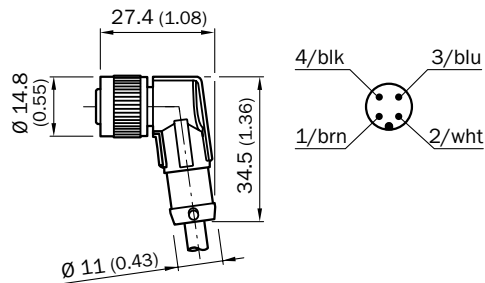
DSL-1204-G05MC / DSL-1204-G10MC



STL-1204-G02MC

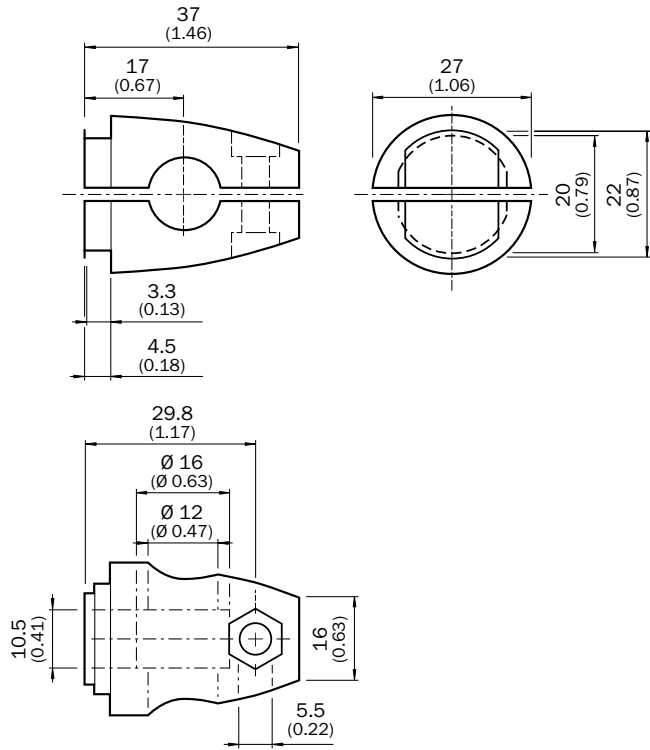


STL-1204-W05MC / STL-1204-W15MC

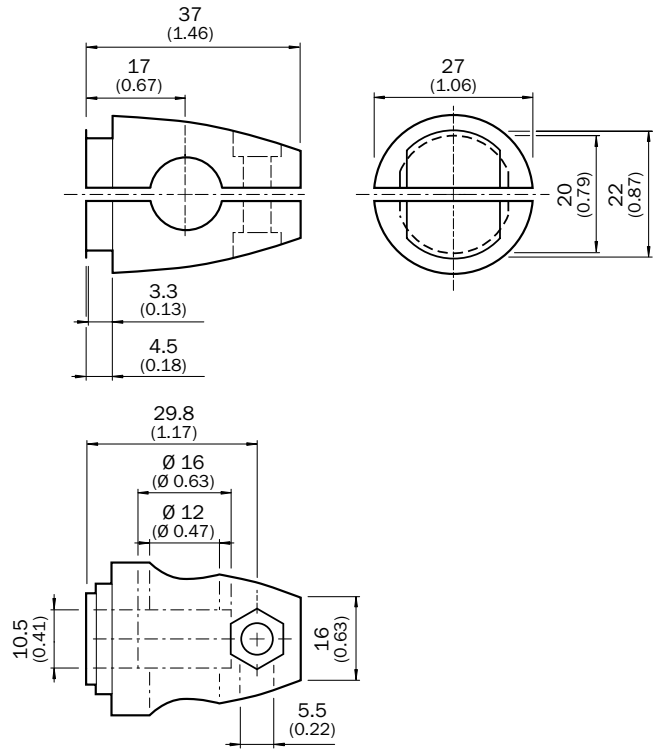


Dimensional drawings Mounting systems

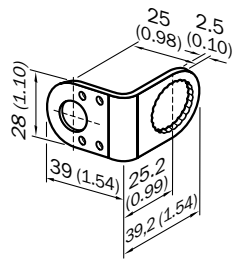
BEF-KHS-KH3



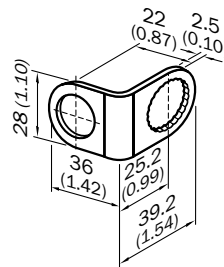
BEF-KHS-KH3N



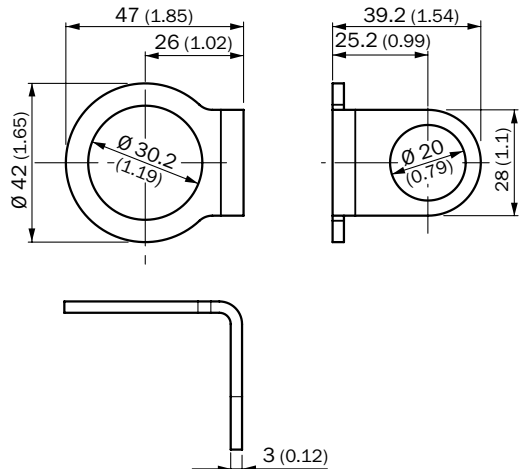
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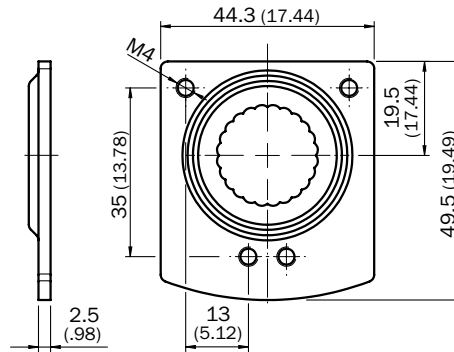
BEF-KHS-N06 / BEF-KHS-N06N



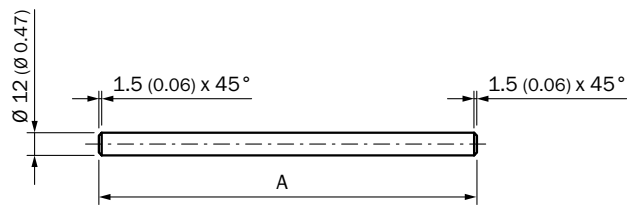
BEF-KHS-N10



BEF-KHS-N11N

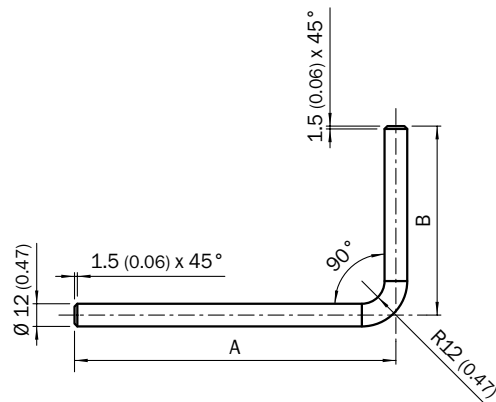


BEF-MS12G-A / BEF-MS12G-B
BEF-MS12G-NA / BEF-MS12G-NB



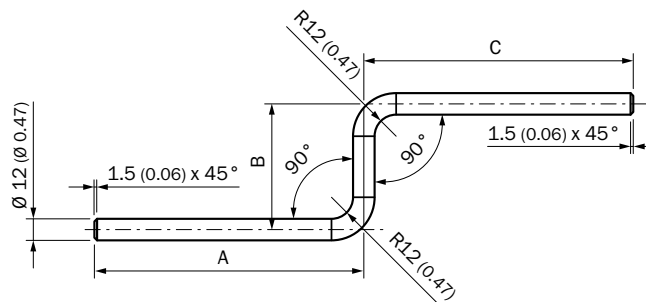
- ① BEF-MS12G-(N)A: A = 200 mm
- ② BEF-MS12G-(N)B: A = 300 mm

BEF-MS12L-A / BEF-MS12L-B



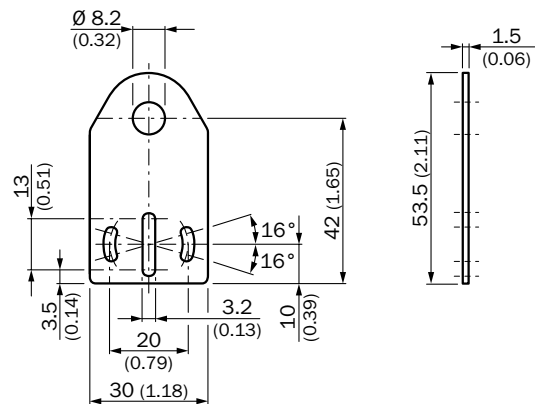
- ① BEF-MS12L-(N)A: A = 200 mm, B = 150 mm
- ② BEF-MS12L-(N)B: A = 250 mm, B = 250 mm

BEF-MS12Z-NA / BEF-MS12Z-NB

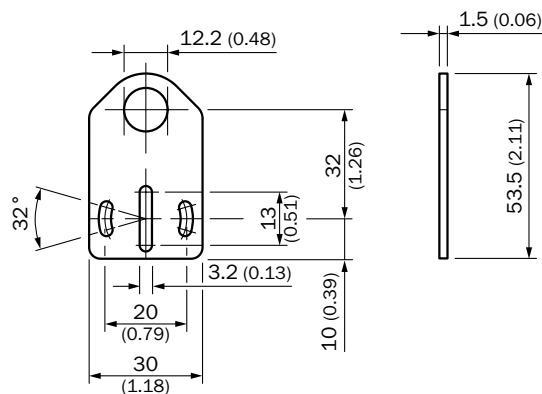


- ① BEF-MS12Z-(N)A: A = 150 mm, B = 70 mm, C = 150 mm
- ② BEF-MS12Z-(N)B: A = 150 mm, B = 70 mm, C = 250 mm

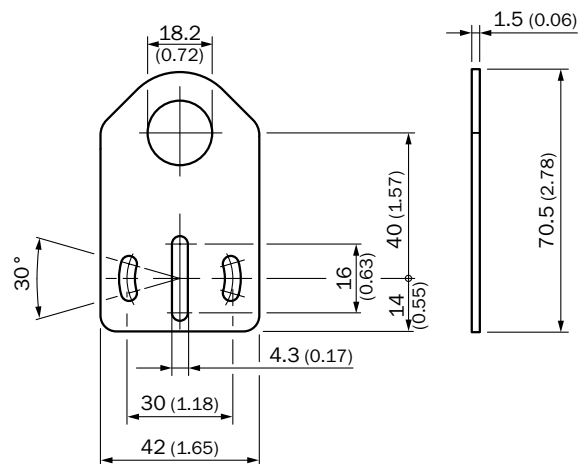
BEF-WG-M08



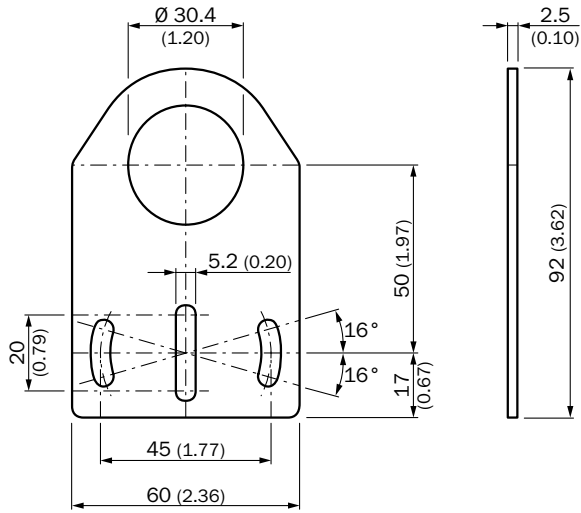
BEF-WG-M12 / BEF-WG-M12N



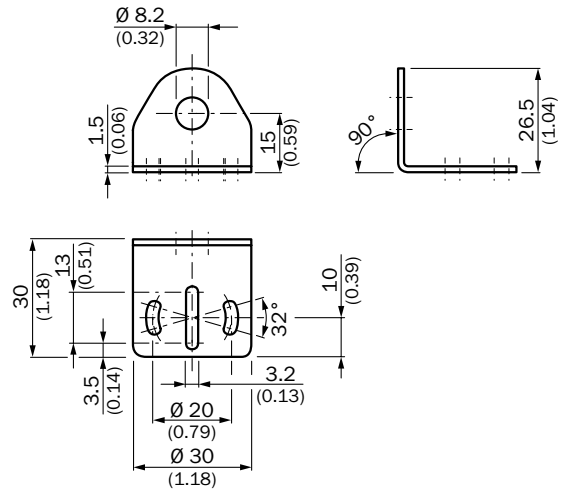
BEF-WG-M18 / BEF-WG-M18N



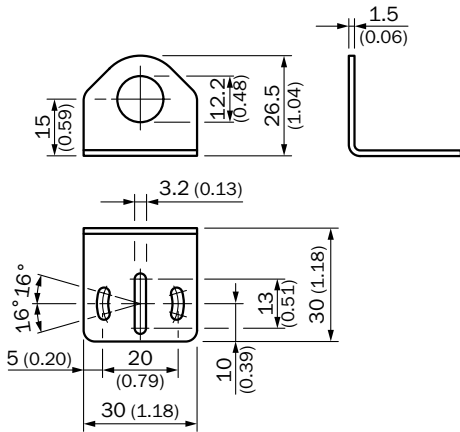
BEF-WG-M30



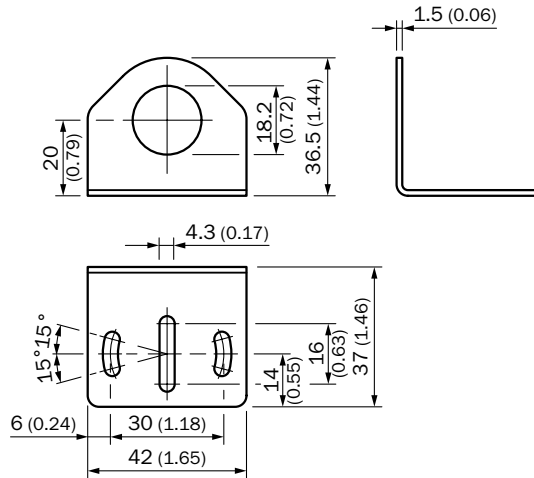
BEF-WN-M08



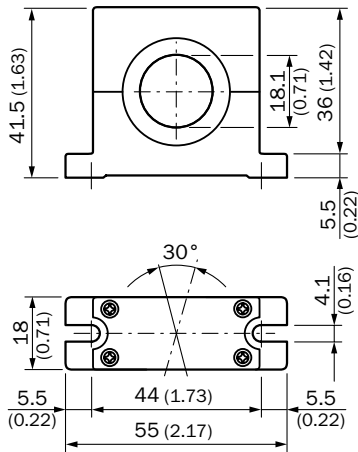
BEF-WN-M12 / BEF-WN-M12N



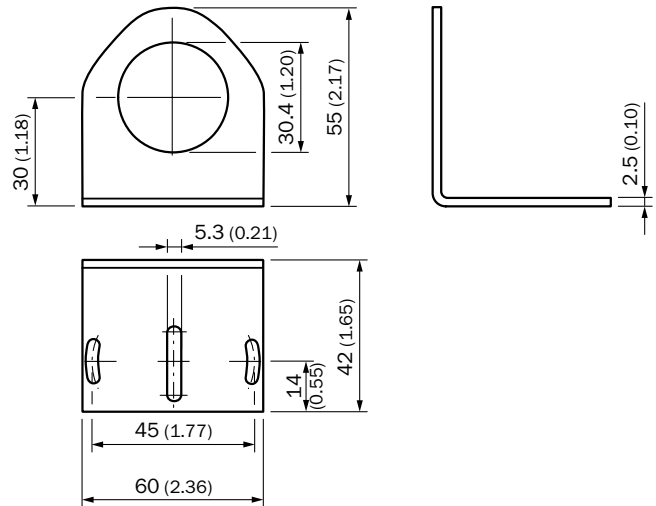
BEF-WN-M18 / BEF-WN-M18N



BEF-WN-M18-ST02



BEF-WN-M30



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