



# IMF12-04NPSVC0S

IMF (phaseout generation)

**INDUCTIVE PROXIMITY SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
IMF12-04NPSVC0S	6035456

Other models and accessories → [www.sick.com/IMF\\_\(phaseout\\_generation\)](http://www.sick.com/IMF_(phaseout_generation))

### Detailed technical data

#### Features

<b>Housing</b>	Cylindrical thread design
<b>Thread size</b>	M12 x 1
<b>Diameter</b>	Ø 12 mm
<b>Sensing range <math>S_n</math></b>	4 mm
<b>Safe sensing range <math>S_a</math></b>	3.24 mm
<b>Installation type</b>	Non-flush
<b>Switching frequency</b>	2,000 Hz
<b>Connection type</b>	Male connector M12, 4-pin
<b>Switching output</b>	PNP
<b>Output function</b>	NO
<b>Electrical wiring</b>	DC 3-wire
<b>Enclosure rating</b>	IP68 <sup>1)</sup> IP69K <sup>2)</sup>
<b>Special features</b>	Resistant to cleaning agents
<b>Special applications</b>	Hygienic and washdown zones, Difficult application conditions

<sup>1)</sup> According to EN 60529.

<sup>2)</sup> According to EN 40050.

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	≤ 10 %

<sup>1)</sup> At  $I_a$  max.

<sup>2)</sup>  $U_b$  and  $T_a$  constant.

<sup>3)</sup> Of  $S_r$ .

<sup>4)</sup> +100 °C for 15 minutes.

<b>Voltage drop</b>	$\leq 2 \text{ V}^{1)}$
<b>Time delay before availability</b>	Approx. 50 ms
<b>Hysteresis</b>	1 % ... 20 %
<b>Reproducibility</b>	5 % <sup>2) 3)</sup>
<b>Temperature drift (of S<sub>r</sub>)</b>	$\pm 10 \%$
<b>EMC</b>	According to EN 60947-5-2
<b>Continuous current I<sub>a</sub></b>	$\leq 200 \text{ mA}$
<b>Short-circuit protection</b>	✓
<b>Reverse polarity protection</b>	✓
<b>Power-up pulse protection</b>	✓
<b>Shock and vibration resistance</b>	30 g, 11 ms/10 Hz ... 55 Hz, 1 mm
<b>Ambient operating temperature</b>	$-40 \text{ °C} \dots +80 \text{ °C}^{4)}$
<b>Housing material</b>	Stainless steel V4A, DIN 1.4404 / AISI 316L
<b>Sensing face material</b>	Plastic, PPS
<b>Housing length</b>	65 mm
<b>Thread length</b>	33 mm
<b>Tightening torque, max.</b>	20 Nm

<sup>1)</sup> At I<sub>a</sub> max.

<sup>2)</sup> U<sub>b</sub> and T<sub>a</sub> constant.

<sup>3)</sup> Of S<sub>r</sub>.

<sup>4)</sup> +100 °C for 15 minutes.

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	212 years
<b>DC<sub>avg</sub></b>	0 %

### Reduction factors

<b>Note</b>	The values are reference values which may vary
<b>Stainless steel (V2A, 304)</b>	Approx. 0.8
<b>Aluminum (Al)</b>	Approx. 0.4
<b>Copper (Cu)</b>	Approx. 0.33
<b>Brass (Br)</b>	Approx. 0.5

### Installation note

<b>Remark</b>	Associated graphic see "Installation"
<b>A</b>	12 mm
<b>B</b>	24 mm
<b>C</b>	12 mm
<b>D</b>	12 mm
<b>E</b>	6 mm
<b>F</b>	32 mm

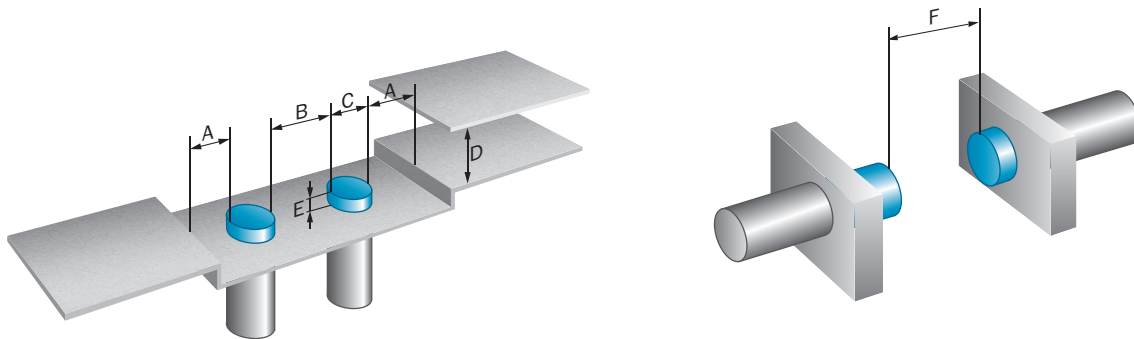
### Classifications

<b>ECl@ss 5.0</b>	27270101
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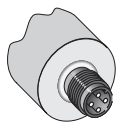
<b>ECl@ss 5.1.4</b>	27270101
<b>ECl@ss 6.0</b>	27270101
<b>ECl@ss 6.2</b>	27270101
<b>ECl@ss 7.0</b>	27270101
<b>ECl@ss 8.0</b>	27270101
<b>ECl@ss 8.1</b>	27270101
<b>ECl@ss 9.0</b>	27270101
<b>ECl@ss 10.0</b>	27270101
<b>ECl@ss 11.0</b>	27270101
<b>ETIM 5.0</b>	EC002714
<b>ETIM 6.0</b>	EC002714
<b>ETIM 7.0</b>	EC002714
<b>ETIM 8.0</b>	EC002714
<b>UNSPSC 16.0901</b>	39122230

### Installation note

Non-flush installation

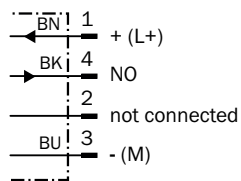


### Connection type



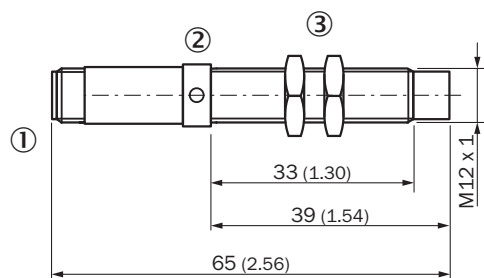
Connection diagram

Cd-007



Dimensional drawing (Dimensions in mm (inch))

IMF08, non flush





- ① Connection
- ② Display LED
- ③ Fastening nuts (2 x); width across 17, stainless steel

Recommended accessories

Other models and accessories → [www.sick.com/IMF\\_\(phaseout\\_generation\)](http://www.sick.com/IMF_(phaseout_generation))

	Brief description	Type	Part no.
<b>Universal bar clamp systems</b>			
	Universal clamp bracket for mounting bars with 12 mm diameter, Stainless steel V4A, without mounting hardware	BEF-KHS-KH3N	5322627
	Plate N05N for universal clamp bracket, M12, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322626), mounting hardware	BEF-KHS-N05N	2051621
<b>Mounting brackets and plates</b>			
	Mounting plate for M12 sensors, stainless steel, without mounting hardware	BEF-WG-M12N	5320950
	Mounting bracket for M12 housing, stainless steel, without mounting hardware	BEF-WN-M12N	5320949

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, angled Head B: male connector, M12, 4-pin, straight Cable: PVC, unshielded, 2 m	DSL-1204-B02MN	6028198
	Head A: female connector, M12, 4-pin, angled Head B: male connector, M12, 4-pin, straight Cable: PVC, unshielded, 5 m	DSL-1204-B05MN	6028199
	Head A: female connector, M12, 4-pin, straight Head B: male connector, M12, 4-pin, straight Cable: PVC, unshielded, 2 m	DSL-1204-G02MN	6028195
	Head A: female connector, M12, 4-pin, straight Head B: male connector, M12, 4-pin, straight Cable: PVC, unshielded, 5 m	DSL-1204-G05MN	6028196

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)