



**INDUCTIVE PROXIMITY SENSORS** 



## IME12-04NPSZU2K | IME

INDUCTIVE PROXIMITY SENSORS



### Ordering information

Туре	Part no.
IME12-04NPSZU2K	1050977

Included in delivery: BEF-MU-M12 (1)

Other models and accessories → www.sick.com/IME

Illustration may differ



### Detailed technical data

### Features

Housing	Cylindrical thread design
Housing	Short-body
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S <sub>n</sub>	4 mm
Safe sensing range S <sub>a</sub>	3.24 mm
Installation type	Non-flush
Switching frequency	2,000 Hz
Connection type	Cable, 3-wire, 2 m
Switching output	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 <sup>1)</sup>
Items supplied	Mounting nut, brass, nickel-plated (2x)

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

### Mechanics/electronics

Supply voltage	10 V DC 30 V DC
Ripple	≤ 10 %
Voltage drop	$\leq 2 V^{(1)}$
Time delay before availability	≤ 100 ms

 $^{1)}$  At I<sub>a</sub> max.

<sup>2)</sup> Supply voltage Ub and constant ambient temperature Ta.

<sup>3)</sup> Of Sr.

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Hysteresis5 %15 %Reproducibility\$2 % 2 °3 °Temperature drift (of S,)± 10 %EMCAcording to EN 60947-5-2Continuos current Ia2 200 mANo lad current10 mACable material0 WRConductor size0.25 m°Cable diameter0.39 m°Short-circuit protection7Power-up plase protection0.9 (11 m// 10 Hz 55 Hz, 1 mm)Abilent operating face material0.9 (11 m// 10 Hz 55 Hz, 1 mm)Abilent operating face9.8 (11 m// 10 Hz 55 Hz, 1 mm)Abilent operating face9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (11 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (12 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (12 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (12 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (12 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (12 m// 10 Hz 55 Hz, 1 mm)Housing face material9.8 (12 m// 10 Hz 55 Hz 10 Hz 55 Hz 10 Hz 55 Hz 10 Hz 10 Hz 10 Hz 10 Hz		
Temperature drift (of S,)±10%EMCAccording to EN 60947-5-2Continuous current Ia<200 mA	Hysteresis	5 % 15 %
EMCAccording to EN 60947-5-2Continuous current Ia200 mANo load current410 mAColuctor sizeURConductor size0.30 mmCable diametera9.30 mmShort-circuit protection4Pover-up pulse protection9.01 ms/10 Hz55 Hz, 1 mmPoder du reinstance9.02 cs75 °CHousing materialHosic, PAG6Funding length4.02 mmHousing length4.02 mmThead length4.02 mmThead length4.02 mmThead length2.02 mmStort Structure ture4.02 mmThead length2.02 mmThead length2.02 mmStort Structure ture3.02 mmStort Stort Structure ture3.02 mmStort Stort	Reproducibility	$\leq 2 \%^{(2)(3)}$
Continuous current IsS 200 mANo load current\$ 10 mACable materialPURConductor size0.25 mm²Cable diameterØ 3.9 mmShort-circuit protection/Power-up pulse protection/Power-up pulse protection30 g. 11 ms/10 Hz 55 Hz, 1 mmAmbient operating temperature-25 °C +75 °CHousing materialPlatic, PA 66Fousing face material4 mmThread length24 mmTightening torque, max.51 NmStock and vibration ensistance30 MmSensing face materialPlatic, PA 66Stock and region24 mmStock and sensing face material24 mmStock and sensing face material21 NmStock an	Temperature drift (of S <sub>r</sub> )	± 10 %
No load current< 10 mA	EMC	According to EN 60947-5-2
Cable materialPURConductor size0.25 mm²Cable diameter0.39 mmShort-circuit protection✓Reverse polarity protection✓Power-up pulse protection✓Shock and vibration resistanceØ.9 ml number of SH2,1 mmAmbient operating temperatureO.9 sci. +75 °CFousing face materialPosici, PAG6Housing length4 mmThead lengthJang Marcel SLTightening torque, max.Jang Marcel SL	Continuous current I <sub>a</sub>	≤ 200 mA
Conductor size0.25 mm²Conductor size0.25 mm²Cable diameter0.30 mmShort-circuit protection✓Reverse polarity protection✓Power-up pulse protection✓Power-up pulse protection✓Anbient operating temperatureOg 11 ms/10 Hz55 Hz, 1 mmAnbient operating temperatureBrass, nickel-platedFousing materialPostic, PA 66Housing length24 mmTiptening torque, max.212 Nm	No load current	≤ 10 mA
Cable diameterØ 3.9 mmShort-circuit protection✓Reverse polarity protection✓Power-up pulse protection✓Shock and vibration resistanceØ 3.0 g. 11 ms/10 Hz 55 Hz. 1 mmAmbient operating temperatureØ 25 °C +75 °CHousing materialBrass, nickel-platedSensing face materialPlastic, PA 66Housing length24 mmThread length24 mmState of the state of	Cable material	PUR
Short-circuit protection·Reverse polarity protection·Power-up pulse protection·Shock and vibration resistance0g 11 ms/10 Hz 55 Hz, 1 mmAmbient operating temperature-25 °C +75 °CHousing materialBrass, nickel-platedSensing face materialPlatic, PA 66Housing length44 mmThread length24 mmState of the state of the	Conductor size	0.25 mm <sup>2</sup>
Reverse polarity protection✓Power-up pulse protection✓Shock and vibration resistance30 g. 11 ms/10 Hz 55 Hz, 1 mmAmbient operating temperature-25 °C +75 °CHousing materialBrass, nickel-platedSensing face materialPlastic, PA 66Housing length44 mmThread length24 mmSensing torque, max.≤ 12 Nm	Cable diameter	Ø 3.9 mm
Power-up pulse protection✓Shock and vibration resistance30 g. 11 ms/10 Hz 55 Hz, 1 mmAmbient operating temperature-25 °C +75 °CHousing materialBrass, nickel-platedSensing face materialPlastic, PA 66Housing length44 mmThread length24 nmState length21 Nm	Short-circuit protection	✓
Shock and vibration resistance30 g. 11 ms/10 Hz 55 Hz, 1 mmAmbient operating temperature-25 °C +75 °CHousing materialBrass, nickel-platedSensing face materialPlastic, PA 66Housing length44 mmThread length24 mmSightening torque, max.= 12 Nm	Reverse polarity protection	✓
Ambient operating temperature-25 °C +75 °CHousing materialBrass, nickel-platedSensing face materialPlastic, PA 66Housing length44 mmThread length24 mmTightening torque, max.≤ 12 Nm	Power-up pulse protection	✓
Housing materialBrass, nickel-platedSensing face materialPlastic, PA 66Housing length44 mmThread length24 nmSensing torque, max.21 Nm	Shock and vibration resistance	30 g, 11 ms/10 Hz 55 Hz, 1 mm
Sensing face material Plastic, PA 66   Housing length 44 mm   Thread length 24 mm   Tightening torque, max. > 12 Nm	Ambient operating temperature	-25 °C +75 °C
Housing length 44 mm   Thread length 24 mm   Tightening torque, max. ≤ 12 Nm	Housing material	Brass, nickel-plated
Thread length 24 mm   Tightening torque, max. ≤ 12 Nm	Sensing face material	Plastic, PA 66
Tightening torque, max. ≤ 12 Nm	Housing length	44 mm
	Thread length	24 mm
UL File No. NRKH.E181493	Tightening torque, max.	≤ 12 Nm
	UL File No.	NRKH.E181493

 $^{1)}$  At I<sub>a</sub> max.

 $^{(2)}$  Supply voltage Ub and constant ambient temperature Ta.  $^{(3)}$  Of Sr.

### Safety-related parameters

MTTFD	1,735 years
DC <sub>avg</sub>	0 %

### **Reduction factors**

Note	The values are reference values which may vary	
St37 steel (Fe)	1	
Stainless steel (V2A, 304)	Approx. 0.8	
Aluminum (AI)	Approx. 0.45	
Copper (Cu)	Approx. 0.4	
Brass (Br)	Approx. 0.4	

#### Installation note

Remark	Associated graphic see "Installation"
A	12 mm
В	24 mm
c	12 mm
D	12 mm
E	8 mm
F	32 mm

## IME12-04NPSZU2K | IME

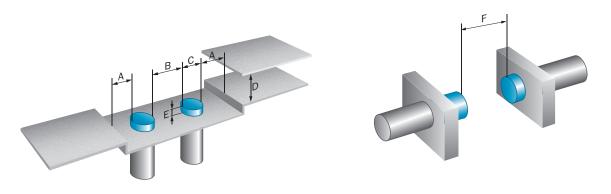
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#### Classifications

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

### Installation note

Non-flush installation



### **Connection diagram**

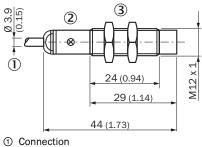
Cd-001



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

IME12 Short-body housing, cable, non-flush



- ② Display LED
- ③ Fastening nuts (2x); width across 17, metal

#### **Recommended** accessories

Other models and accessories → www.sick.com/IME

	Brief description	Туре	Part no.
Mounting brackets and plates			
	Mounting plate for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M12	5321869
40	Mounting bracket for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M12	5308447
Terminal and alignment brackets			
info Cla	Clamping block for round sensors M12, without fixed stop, plastic (PA12), glass-fiber re- inforced, mounting hardware included	BEF-KH-M12	2051479
	Clamping block for round sensors M12, with fixed stop, plastic (PA12), glass-fiber rein- forced, mounting hardware included	BEF-KHF-M12	2051480

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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.

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