

IMF30-15BNSNC0S

IMF

INDUCTIVE PROXIMITY SENSORS





Ordering information

Туре	Part no.
IMF30-15BNSNC0S	1076657

Included in delivery: BEF-MU-M30N1(1)

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

Illustration may differ



Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M30 x 1.5
Diameter	Ø 30 mm
Sensing range S _n	15 mm
Safe sensing range S _a	12.15 mm
Installation type	Flush
Switching frequency	500 Hz
Connection type	Male connector M12, 4-pin 1)
Switching output	NPN
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP68 ²⁾ IP69K ³⁾
Special features	Resistant to cleaning agents, Visual adjustment indicator, Temperature resistance
Special applications	Hygienic and washdown zones, Difficult application conditions
Items supplied	Mounting nut, V4A stainless steel (2x)

 $^{^{1)}}$ With gold plated contact pins.

²⁾ According to EN 60529.

³⁾ According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	10 V DC 30 V DC
Ripple	≤ 10 %
Voltage drop	\leq 2 V $^{1)}$
Hysteresis	3 % 20 %
Reproducibility	≤ 2 % ^{2) 3)}
Temperature drift (of S _r)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I _a	≤ 200 mA
No load current	≤ 10 mA
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	$100~{\rm g}/2~{\rm ms}/500$ cycles; $150~{\rm g}/1$ Mio cycles; $10~{\rm Hz}55~{\rm Hz}/1~{\rm mm};55~{\rm Hz}500~{\rm Hz}/60~{\rm g}$
Ambient operating temperature	-40 °C +100 °C
Housing material	Stainless steel V4A, DIN 1.4404 / AISI 316L
Sensing face material	Plastic, LCP
Housing length	70 mm
Thread length	52 mm
Tightening torque, max.	Typ. 100 Nm
Protection class	III
UL File No.	E181493

¹⁾ At I_a max

Safety-related parameters

MTTF _D	1,971 years
DC _{avg}	0 %
T _M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.62
Aluminum (AI)	Approx. 0.26
Copper (Cu)	Approx. 0.17
Brass (Br)	Approx. 0.27

Installation note

Remark	Associated graphic see "Installation"
В	40 mm
C	30 mm
D	45 mm
F	120 mm

 $^{^{\}rm 2)}$ Supply voltage $\rm U_B$ and constant ambient temperature Ta.

³⁾ Of Sr.

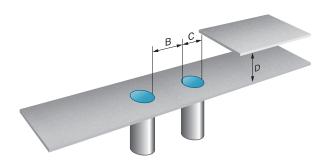
INDUCTIVE PROXIMITY SENSORS

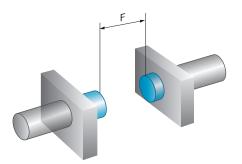
Classifications

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

Flush installation





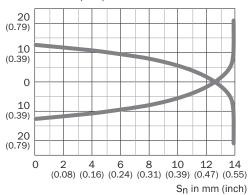
Connection diagram

Cd-007

Response diagram

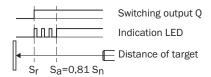
Response diagram

Distance in mm (inch)



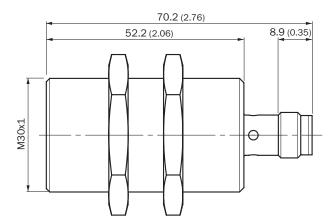
Functional principle

Installation aid



Dimensional drawing (Dimensions in mm (inch))

IMF30, flush



Recommended accessories

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

	Brief description	Туре	Part no.
Universal bar	clamp systems		
	Plate N10 for universal clamp bracket, M30, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N10	2062372
Mounting bra	ckets and plates		
	Mounting plate for M30 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M30	5321871
40	Mounting bracket for M30 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M30	5308445
Others			
	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones, Drag chain operation	DOL-1204-G02MRN	6058291
	 Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation 	DOL-1204-G05MRN	6058476
	Connection type head A: Female connector, M12, 4-pin, angled Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation	DOL-1204-W02MRN	6058474
	 Connection type head A: Female connector, M12, 4-pin, angled Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones, Drag chain operation 	DOL-1204-W05MRN	6058477

	Brief description	Туре	Part no.
5	 Connection type head A: Female connector, M12, 4-pin, angled Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PP Description: Sensor/actuator cable, unshielded, LED function display Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2), only suitable for PNP sensors Application: Hygienic and washdown zones, Drag chain operation 	DOL-1204-L02MRN	6058482
	 Connection type head A: Female connector, M12, 4-pin, angled Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded, LED function display Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2), only suitable for PNP sensors Application: Hygienic and washdown zones, Drag chain operation 	DOL-1204-LO5MRN	6058483
6	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Male connector, M12, 4-pin, straight Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation	DSL-1204-G02MRN	6058499
6	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Male connector, M12, 4-pin, straight Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation	DSL-1204-G05MRN	6058500
8	Connection type head A: Female connector, M12, 4-pin, angled Connection type head B: Male connector, M12, 4-pin, straight Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation	DSL-1204-B02MRN	6058502
£	 Connection type head A: Female connector, M12, 4-pin, angled Connection type head B: Male connector, M12, 4-pin, straight Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation 	DSL-1204-B05MRN	6058503

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	Brief description	Туре	Part no.
6	 Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Male connector, M12, 4-pin, straight Signal type: Sensor/actuator cable Cable: 20 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones, Drag chain operation 	YF2AP4- 020PA2M2AP4	2143765

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