



IMF30-20NNSCOS

IMF

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



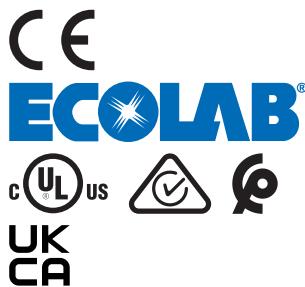
Illustration may differ

Ordering information

Type	part no.
IMF30-20NNNSNCOS	1076661

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

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



Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M30 x 1.5
Diameter	Ø 30 mm
Sensing range S_n	20 mm
Safe sensing range S_a	16.2 mm
Installation type	Non-flush
Switching frequency	500 Hz
Connection type	Male connector M12, 4-pin ¹⁾
Switching output	NPN
Switching output detail	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	≤ 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 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	Stainless steel V4A, DIN 1.4404 / AISI 316L
Sensing face material	Plastic, LCP
Housing length	70 mm
Thread length	40 mm
Tightening torque, max.	Typ. 100 Nm
Protection class	III
UL File No.	E181493

1) At I_a max.

2) Supply voltage U_B and constant ambient temperature T_a.

3) Of S_r.

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. 0.78
Aluminum (Al)	Approx. 0.44
Copper (Cu)	Approx. 0.36
Brass (Br)	Approx. 0.46

Installation note

Remark	Associated graphic see "Installation"
A	20 mm
B	62 mm
C	30 mm
D	60 mm

E	20 mm
F	160 mm

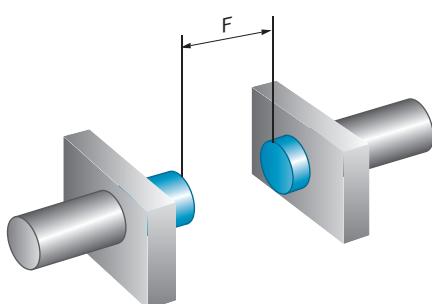
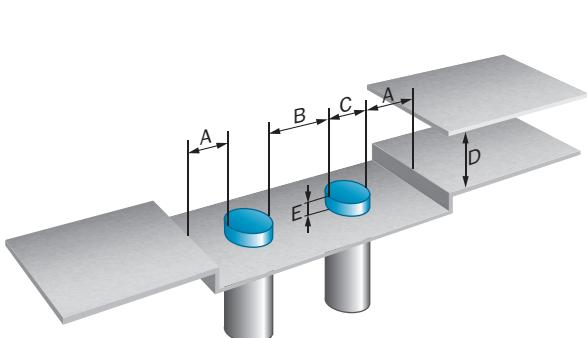
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
ECOLAB certificate	✓
FDA-Certificate	✓
cULus certificate	✓

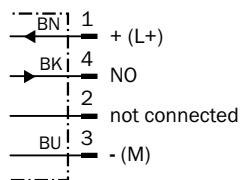
Classifications

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

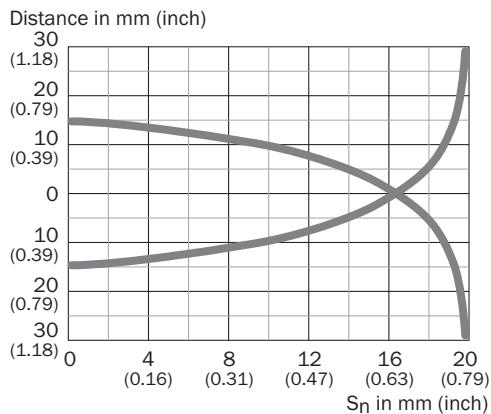
Installation note Non-flush installation



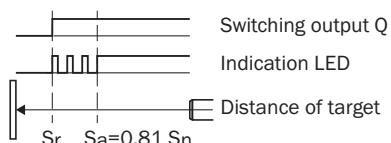
Connection diagram Cd-007



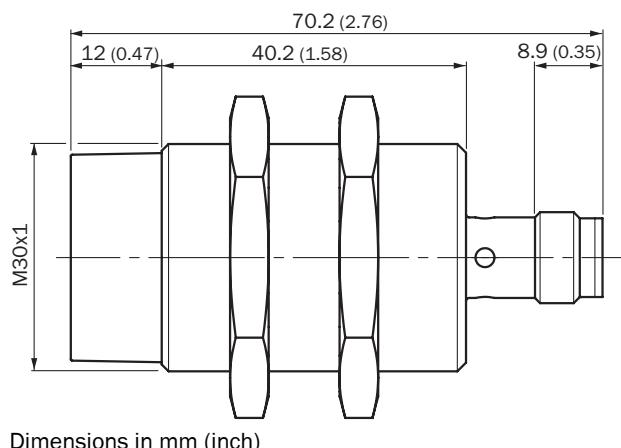
Response diagram



Functional principle Installation aid



Dimensional drawing IMF30, non flush



Recommended accessories

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

Brief description	Type	part no.	
Mounting systems			
	<ul style="list-style-type: none"> Description: Mounting bracket for M30 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware 	BEF-WN-M30	5308445
	<ul style="list-style-type: none"> Description: Mounting plate for M30 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware 	BEF-WG-M30	5321871
	<ul style="list-style-type: none"> Description: Plate N10 for universal clamp bracket, M30 Material: Steel, zinc diecast Details: Zinc plated steel (sheet), Zinc die cast (clamping bracket) Items supplied: Universal clamp (5322626), mounting hardware Usable for: M30 round sensors 	BEF-KHS-N10	2062372

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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 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-G05MRN	6058476
	<ul style="list-style-type: none"> 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 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-W02MRN	6058474
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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 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-L02MRN	6058482
	<ul style="list-style-type: none"> 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), only suitable for PNP sensors Application: Hygienic and washdown zones, Drag chain operation 	DOL-1204-L05MRN	6058483
	<ul style="list-style-type: none"> 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 	DSL-1204-G02MRN	6058499

	Brief description	Type	part no.
	<ul style="list-style-type: none"> 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 		
	<ul style="list-style-type: none"> 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 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 	DSL-1204-G05MRN	6058500
	<ul style="list-style-type: none"> 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 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 	DSL-1204-B02MRN	6058502
	<ul style="list-style-type: none"> 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 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 	DSL-1204-B05MRN	6058503
	<ul style="list-style-type: none"> 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

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."

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