



IM30-20BPS-NC1

IMI

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
IM30-20BPS-NC1	6027582

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

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

Detailed technical data

Features

Housing	Metric
Thread size	M30 x 1.5
Diameter	Ø 30 mm
Pressure resistance	≤ 40 bar
Sensing range S_n	20 mm
Safe sensing range S_a	16.2 mm
Installation type	Flush
Switching frequency	100 Hz
Connection type	Male connector M12, 4-pin
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP68, IP69K ¹⁾
Special features	Sensing face made of stainless steel V4A, Resistant to cleaning agents, triple sensing range, Visual adjustment indicator, IO-Link
Special applications	Hygienic and washdown zones, Difficult application conditions
Items supplied	Mounting nut, V4A stainless steel (2x) Washer, V4A stainless steel, with locking teeth (2x)

¹⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
-----------------------	---------------------

¹⁾ Of V_S .

²⁾ At I_a max.

³⁾ Of S_r .

⁴⁾ UB = 20 V DC ... 30 V DC, TA = 23 °C ± 5 °C.

Ripple	$\leq 20 \% ^{1)}$
Voltage drop	$\leq 2 \text{ V} ^{2)}$
Time delay before availability	$\leq 40 \text{ ms}$
Hysteresis	1 % ... 15 %
Reproducibility	$\leq 5 \% ^{3) 4)}$
Temperature drift (of S_r)	$\leq 10 \%$
EMC	According to EN 60947-5-2
Continuous current I_a	$\leq 200 \text{ mA}$
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-25 °C ... +85 °C
Housing material	Stainless steel V4A, DIN 1.4404 / AISI 316L
Sensing face material	Stainless steel V4A, DIN 1.4404 / AISI 316L
Housing length	63.5 mm
Thread length	42 mm
Tightening torque, max.	$\leq 150 \text{ Nm}$
Protection class	III
UL File No.	E191603

¹⁾ Of V_S .

²⁾ At I_a max.

³⁾ Of S_r .

⁴⁾ $U_B = 20 \text{ V DC} \dots 30 \text{ V DC}$, $T_A = 23 \text{ °C} \pm 5 \text{ °C}$.

Safety-related parameters

MTTF_D	10 years
DC_{avg}	0%
T_M (mission time)	20 years

Communication interface

Communication interface	IO-Link V1.0
Communication Interface detail	COM2 (38,4 kBaud)
Process data length	1 Byte
Process data structure	Bit 0 = S_r reached
Process data structure A	Bit 1 = S_a reached

Reduction factors

Note	The values are reference values which may vary
St37 steel (Fe)	Approx. 1
Stainless steel (V4A, 316L)	Approx. 0.5
Aluminum (Al)	Approx. 1
Copper (Cu)	Approx. 0.9
Brass (Br)	Approx. 1.2

Installation note

Remark	Associated graphic see "Installation"
B	80 mm
C	30 mm
D	60 mm
F	200 mm

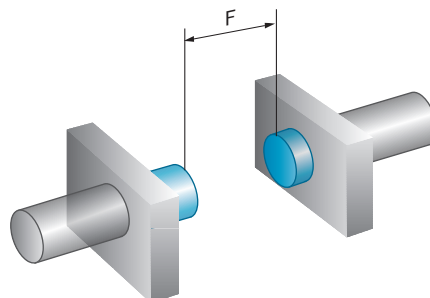
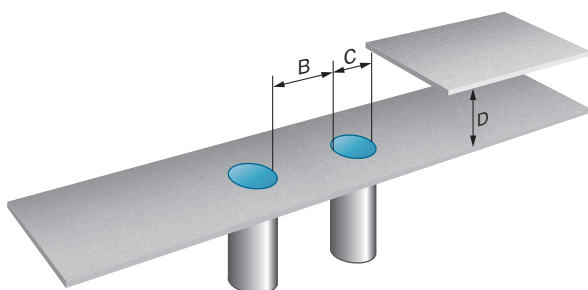
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓

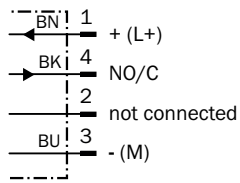
Classifications

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

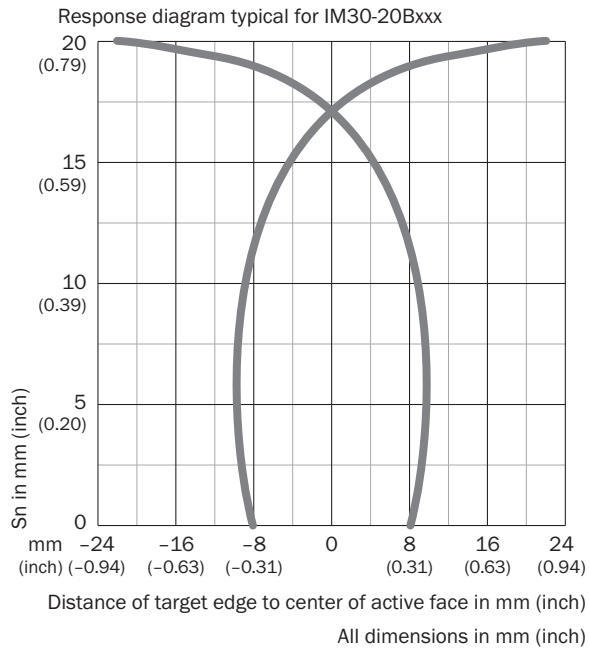
Installation note Flush installation



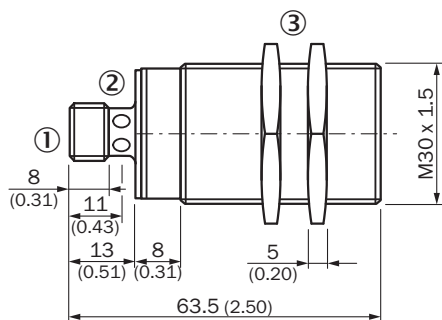
Connection diagram Cd-456



Response diagram



Dimensional drawing IM30 Inox, flush



Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ Fastening nuts (2x); width across 24, metal

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• Description: Mounting bracket for M30 sensors • Material: Steel • Details: Steel, zinc coated • Items supplied: Without mounting hardware	BEF-WN-M30	5308445
	• Description: Mounting plate for M30 sensors • Material: Steel • Details: Steel, zinc coated • Items supplied: Without mounting hardware	BEF-WG-M30	5321871

	Brief description	Type	part no.
connectors and cables			
	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, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones	DOL-1204-G02MNI	6052613
	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, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones	DOL-1204-G05MNI	6052615
	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, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones	DOL-1204-W02MNI	6052614
	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, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones	DOL-1204-W05MNI	6052616
	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, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2), only suitable for PNP sensors Application: Hygienic and washdown zones	DOL-1204-L02MNI	6052621
	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, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2), only suitable for PNP sensors Application: Hygienic and washdown zones	DOL-1204-L05MNI	6052622
	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)	DOL-1204-G02MRN	6058291

	Brief description	Type	part no.
	• Application: Hygienic and washdown zones, Drag chain operation • 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
	• 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
	• 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
	• 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), 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 • 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
	• Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones	YF2A14-050VB3XLEAX	2096235
	• Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A14-050UB3XLEAX	2095608

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