



IM12-02BPS-ZC1

IM Standard

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
IM12-02BPS-ZC1	6011971

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

Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	2 mm
Installation type	Flush
Switching frequency	2,000 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	IP67 ¹⁾

¹⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 % ¹⁾
Voltage drop	≤ 1.2 V ²⁾
Time delay before availability	≤ 100 ms
Hysteresis	2 % ... 10 %

¹⁾ Of V_S .

²⁾ At I_a max.

³⁾ Supply voltage U_B and constant ambient temperature T_a .

⁴⁾ Of S_r .

Reproducibility	$\leq 2 \%$ ^{3) 4)}
Temperature drift (of S_r)	$\pm 10 \%$
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 ... +70 °C
Housing material	Brass, Nickel-plated brass
Sensing face material	Plastic
Housing length	65 mm
Thread length	43 mm
Tightening torque, max.	$\leq 10 \text{ Nm}$

1) Of V_S .

2) At I_a max.

3) Supply voltage U_B and constant ambient temperature T_a .

4) Of S_r .

Safety-related parameters

MTTF_D	192 years
DC_{avg}	0 %

Installation note

Remark	Associated graphic see "Installation"
A	6 mm
B	12 mm
C	12 mm
D	6 mm
E	0 mm
F	16 mm

Certificates

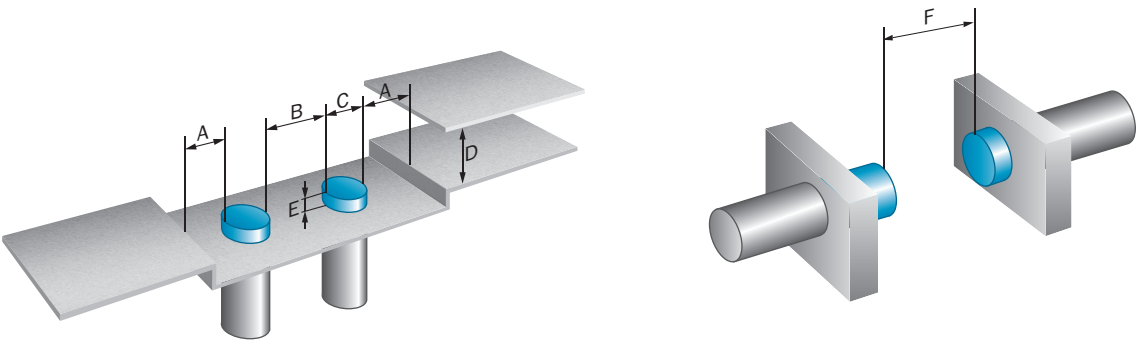
EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓

Classifications

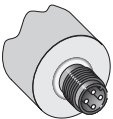
ECLASS 5.0	27270101
ECLASS 5.1.4	27270101
ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101

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

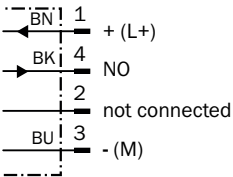
Installation note Non-flush installation



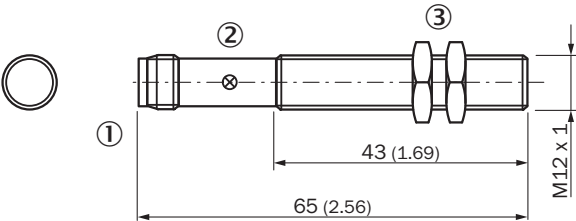
Connection type



Connection diagram Cd-007



Dimensional drawing







Dimensions in mm (inch)







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

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Description: Clamping block for round sensors M12, with fixed stop• Material: Plastic• Details: Plastic (PA12), glass-fiber reinforced• Items supplied: Mounting hardware included	BEF-KHF-M12	2051480
	<ul style="list-style-type: none">• Description: Clamping block for round sensors M12, without fixed stop• Material: Plastic• Details: Plastic (PA12), glass-fiber reinforced• Items supplied: Mounting hardware included	BEF-KH-M12	2051479
	<ul style="list-style-type: none">• Description: Mounting plate for M12 sensors• Material: Steel• Details: Steel, zinc coated• Items supplied: Without mounting hardware	BEF-WG-M12	5321869
	<ul style="list-style-type: none">• Description: Mounting bracket for M12 sensors• Material: Steel• Details: Steel, zinc coated• Items supplied: Without mounting hardware	BEF-WN-M12	5308447

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Description: Unshielded, Head A: female connector, M12, 4-pin, angled, unshielded, for power supply, for cable diameter 3 mm ... 6.5 mm Head B: - Connection systems: Screw-type terminals Permitted cross-section: $\leq 0.75 \text{ mm}^2$ 	DOS-1204-W	6007303
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Description: Unshielded, Head A: female connector, M12, 4-pin, straight, unshielded, for power supply, for cable diameter 4 mm ... 6 mm Head B: - Connection systems: Screw-type terminals Permitted cross-section: $\leq 0.75 \text{ mm}^2$ 	DOS-1204-G	6007302
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: $\leq 0.75 \text{ mm}^2$ 	STE-1204-G	6009932
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: $\leq 0.75 \text{ mm}^2$ 	STE-1204-W	6022084
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-020VB3XLEAX	2096234
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YG2A14-020VB3XLEAX	2095895
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, 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 	YG2A14-050VB3XLEAX	2095897
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded, LED function display Note: Only suitable for PNP sensors Application: Zones with chemicals, Uncontaminated zones 	YI2A14-020VB3XLEAX	2096222
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded, LED function display Note: Only suitable for PNP sensors Application: Zones with chemicals, Uncontaminated zones 	YI2A14-050VB3XLEAX	2096223
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded 	YG2A14-C60VB3XLEAX	2145709

	Brief description	Type	part no.
	<ul style="list-style-type: none"> Application: Zones with chemicals, Uncontaminated zones Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YG2A14-010VB3XLEAX	2145710
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded, LED function display Note: Only suitable for PNP sensors Application: Zones with chemicals, Uncontaminated zones 	YI2A14-C60VB3XLEAX	2145719
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded, LED function display Note: Only suitable for PNP sensors Application: Zones with chemicals, Uncontaminated zones 	YI2A14-010VB3XLEAX	2145720
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded, LED function display Note: Only suitable for PNP sensors Application: Zones with chemicals, Uncontaminated zones 	YI2A14-030VB3XLEAX	2145721
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-C60VB3XLEAX	2145707
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-010VB3XLEAX	2145708

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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