



IM18-20NPS-ZC1

IML

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

Ordering information



Type	Part no.
IM18-20NPS-ZC1	6027519

Illustration may differ



Detailed technical data

Features

Housing	Cylindrical thread design
Housing	Standard
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	20 mm
Safe sensing range S_a	16.2 mm
Installation type	Non-flush
Switching frequency	+ 200 Hz
Connection type	Male connector M12, 4-pin
Switching output	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 ¹⁾
Special features	Triple sensing range

¹⁾ According to EN 60529.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 20 % ¹⁾
Voltage drop	≤ 2 V ²⁾
Current consumption	10 mA ³⁾
Time delay before availability	≤ 100 ms
Hysteresis	1 % ... 15 %

¹⁾ Of V_S .

²⁾ At I_a max.

³⁾ Without load.

⁴⁾ Of S_r .

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

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Reproducibility	≤ 5 % ^{4) 5)}
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 200 mA
Short-circuit protection	✓
Reverse polarity 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, chromium-plated
Sensing face material	Plastic, PTB
Housing length	63.5 mm
Thread length	32 mm
Tightening torque, max.	≤ 25 Nm
Items supplied	Mounting nut, brass, chromium-plated (2x) Washer, brass, chromium-plated, with locking teeth (2x)

¹⁾ Of V_S.

²⁾ At I_a max.

³⁾ Without load.

⁴⁾ Of S_r.

⁵⁾ U_B = 20 V DC ... 30 V DC, T_A = 23 °C ± 5 °C.

Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.66
Aluminum (Al)	Approx. 0.4
Copper (Cu)	Approx. 0.35
Brass (Br)	Approx. 0.45

Installation note

Remark	Associated graphic see "Installation"
A	21 mm
B	60 mm
C	18 mm
D	60 mm
E	20 mm
F	200 mm

Classifications

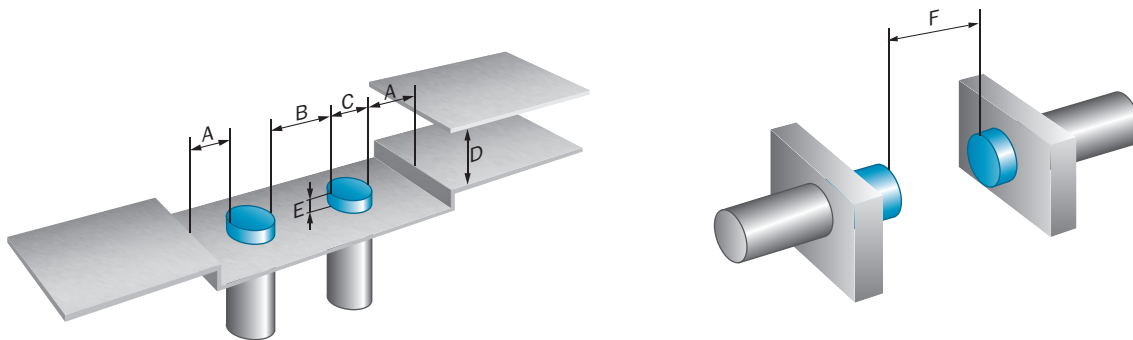
ECI@ss 5.0	27270101
ECI@ss 5.1.4	27270101
ECI@ss 6.0	27270101
ECI@ss 6.2	27270101
ECI@ss 7.0	27270101
ECI@ss 8.0	27270101

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ECI@ss 8.1	27270101
ECI@ss 9.0	27270101
ECI@ss 10.0	27270101
ECI@ss 11.0	27270101
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
UNSPSC 16.0901	39122230

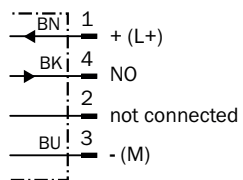
Installation note

Non-flush installation



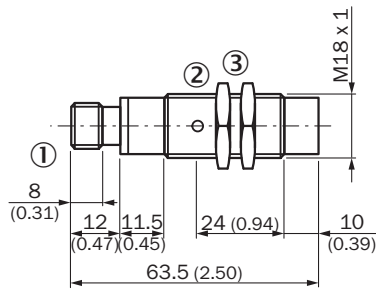
Connection diagram

Cd-007









Dimensional drawing (Dimensions in mm (inch))

IM18 Triplex, connector, non-flush





- ① Connection
- ② Indication LED
- ③ Fastening nuts (2x); width across 36, metal

Recommended accessories

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N06 for universal clamp bracket, M18, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N06	2051612
Mounting brackets and plates			
	Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M18	5321870
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446
Terminal and alignment brackets			
	Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KH-M18	2051481
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A14-020VB3XLEAX	2096234
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A14-020VB3XLEAX	2095895
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG2A14-050VB3XLEAX	2095897

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	Brief description	Type	Part no.
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303

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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