Product data sheet

IMG18-12NPSZU2S

IMG

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

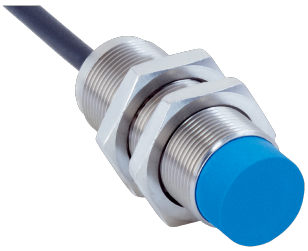


Illustration may differ

Ordering information

Type	Part no.
IMG18-12NPSZU2S	1135573

Included in delivery: BEF-MU-M18 (1)

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

Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	12 mm
Safe sensing range S_a	9.72 mm
Installation type	Non-flush
Switching frequency	1,000 Hz
Connection type	Cable, 3-wire, 2 m
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP67 [1] IP68 [1] IP69K [2]
Special features	Resistant against coolant lubricants, Temperature resistance
Special applications	Zones with coolants and lubricants, Mobile machines, Difficult application conditions
Items supplied	Mounting nut, brass, nickel-plated (2x)

[1] According to EN 60529.
[2] According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %

[1] At I_a max.
[2] Supply voltage U_B and constant ambient temperature Ta.
[3] Of Sr.

Voltage drop	≤ 2 V [1]
Time delay before availability	≤ 100 ms
Hysteresis	3 % ... 20 %
Reproducibility	≤ 2 % [2] [3]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2
Environmental test	Quick temperature change EN 60068-2-14, Na: TA = –25 °C, TB = 75 °C, t1 = 40 min, t2 = < 10 s, 300 cycles
Corrosion test	Salt spray test EN 60068-2-52: severity 5, 4 cycles
Continuous current I_a	≤ 200 mA
No load current	≤ 10 mA
Cable material	PUR
Conductor size	0.25 mm²
Cable diameter	Ø 3.9 mm
Bending radius	With fixed installation > 5 x cable diameter For flexible use > 10 x cable diameter
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	Vibration resistance acc. to EN 60068-2-6 Fc: 60 g peak (10 Hz ... 2,000 Hz) Long-term shock resistance acc. to EN 60068-2-27 Ea: 100 g 2 ms sinusoidal; 500 shocks in each direction of the 3 coordinate axes Broadband noise acc. to EN 60068-2-64: 15 g rms (5 Hz ... 2,000 Hz) / 8 hours in each direction of the 3 coordinate axes
Indication	
LED yellow	Switching status Permanently on: Switching output active
Ambient operating temperature	–40 °C ... +85 °C
Housing material	Nickel-plated brass
Sensing face material	Plastic, LCP
Housing length	59.4 mm
Thread length	46.9 mm
Tightening torque, max.	≤ 30 Nm
Protection class	III
UL File No.	E181493

[1] At I_a max.

[2] Supply voltage U_B and constant ambient temperature Ta.

[3] Of Sr.

Safety-related parameters

$MTTF_D$	1,820 years
DC_{avg}	0 %
T_M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary

St37 steel (Fe)	1
Stainless steel (V2A, 304)	Approx. 0.82
Aluminum (Al)	Approx. 0.45
Copper (Cu)	Approx. 0.39
Brass (Br)	Approx. 0.47

Installation note

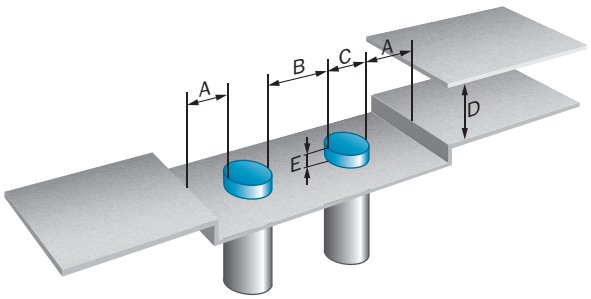
Remark	Associated graphic see "Installation"
A	18 mm
B	50 mm
C	18 mm
D	36 mm
E	12 mm
F	96 mm

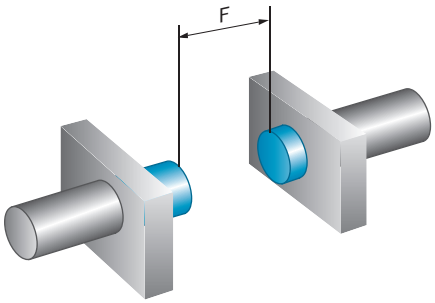
Classifications

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

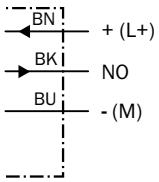
Non-flush installation



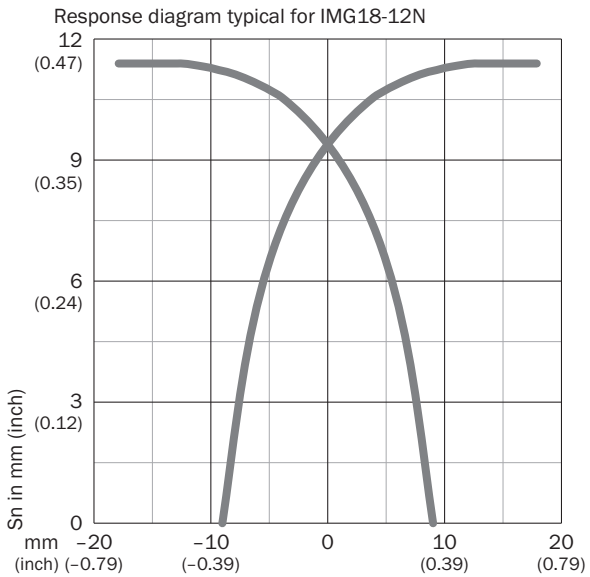


Connection diagram

Cd-001

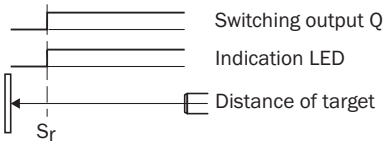


Response diagram



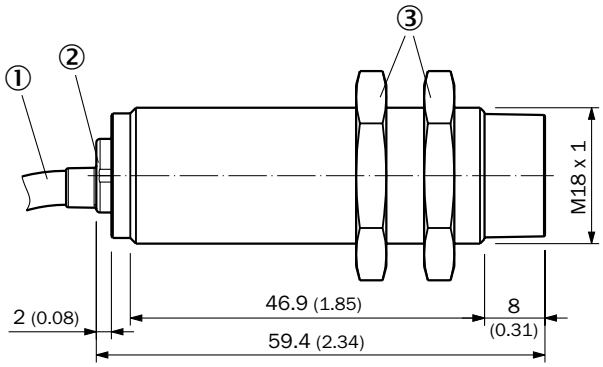
All dimensions in mm (inch)

Functional principle



Dimensional drawing (Dimensions in mm (inch))

IMG18, standard variant, cable, non-flush



① Connection
② Display LED
③ Fastening nuts (2x); AF24; nickel-plated brass

Recommended accessories

Other models and accessories ➜ www.sick.com/IMG

	Brief description	Type	Part no.
Mounting brackets and plates			
	• **Description:** Mounting plate for M18 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware • **Suitable for:** GR18, V180-2, V18, W15, Z1, Z2	BEF-WG-M18	5321870
	• **Description:** Mounting bracket for M18 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware • **Suitable for:** GR18, V180-2, V18, W15, Z1, Z2	BEF-WN-M18	5308446
Others			
	• **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Application:** Hygienic and washdown zones	DOS-1204-GN	6028357

	Brief description	Type	Part no.
	• **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Application:** Hygienic and washdown zones	STE-1204-GN	6028359
	• **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Application:** Hygienic and washdown zones	DOS-1204-WN	6028358
	• **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Note:** For 2 cable connections • **Application:** Hygienic and washdown zones	STE-1204-TN	6028360

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

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