



IMS18-08BPSZC0SS03

IMS

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

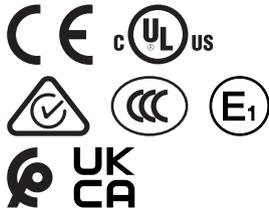


Ordering information

Type	part no.
IMS18-08BPSZCOSS03	1112343

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

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



Detailed technical data

Features

Housing	Metric
Housing	Standard design
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	8 mm
Safe sensing range S_a	6.48 mm
Installation type	Flush
Switching frequency	1,000 Hz
Connection type	Male connector M12, 4-pin ¹⁾
Switching output	PNP
Switching output detail	PNP
Output function	NO
Electrical wiring	DC 3-wire
Enclosure rating	IP68 ²⁾ IP69K ³⁾
Special features	Resistant against coolant lubricants, Temperature resistance
Special applications	Mobile machines, Zones with coolants and lubricants, Difficult application conditions
Items supplied	Mounting nut, brass, nickel-plated (2x)

¹⁾ With gold plated contact pins.

²⁾ According to EN 60529.

³⁾ According to ISO 20653:2013-03.

Mechanics/electronics

Supply voltage	7.2 V DC ... 60 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2.5 V ¹⁾
Time delay before availability	100 ms
Hysteresis	3 % ... 20 %
Reproducibility	≤ 2 % ²⁾
Temperature drift (of S_r)	± 10 %
EMC	<p>Emitted interference and interference immunity in accordance with Motor Insurance Directive ECE-R10 Rev. 5: E1-Type approval</p> <p>Interference immunity in accordance with DIN ISO 11452-2: 100 V/m AM vertical 20 MHz - 800 MHz; AM horizontal 200 MHz - 800 MHz; PM vertical/horizontal 800 MHz - 2.7 GHz</p> <p>Conducted disturbances in accordance with ISO 7637-2 (pulse/severity/failure criterion 12 V/failure criterion 24 V): 1/IV/C/C, 2a/IV/A/A, 2b/IV/C/C, 3a/IV/A/A, 3b/IV/A/A, 4/IV/C/A, 5a/IV/B/B, 5b/IV/B/B</p> <p>EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 burst: 2 kV EN 61000-4-5 surge: 0,5 kV L-to-L, Ri: 2 Ohm EN 61000-4-6 HF wire-bound: 10 V</p>
Environmental test	Quick temperature change EN 60068-2-14, Na: TA = -25 °C, TB = 75 °C, t1 = 40 min, t2 = < 10 s, 300 cycles, Delta S _r ≤ 10%
Continuous current I_a	≤ 200 mA ³⁾
No load current	≤ 10 mA
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	<p>Vibration resistance EN 60068-2-6 Fc: 25 g peak (10 Hz ... 2,000 Hz) / -20 °C ... +50 °C</p> <p>Shock resistance EN 60068-2-27 Ea: 100 g 11 ms; 3 shocks in every direction of the 3 coordinate axes / -40 °C ... +85 °C</p> <p>Continuous shock resistance EN 60068-2-29 Eb: 40 g 3 ms rise, 7 ms fall / 5,000 shocks in every direction of the 3 coordinate axes / -20 °C ... +50 °C</p> <p>Broadband noise EN 60068-2-64: 15 g rms (5 Hz ... 2,000 Hz) / 8 hours in every direction of the 3 coordinate axes / -40 °C ... +85 °C</p>
Ambient operating temperature	-40 °C ... +100 °C
Housing material	Brass, nickel-plated
Sensing face material	Plastic, LCP
Housing length	69 mm
Thread length	51 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⁾ See "Continuous current I_a above temperature" characteristic curve.

Safety-related parameters

DC_{avg}	0 %
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Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.68
Aluminum (Al)	Approx. 0.41
Copper (Cu)	Approx. 0.3
Brass (Br)	Approx. 0.44

Installation note

Remark	Associated graphic see "Installation"
B	18 mm
C	18 mm
D	24 mm
F	64 mm

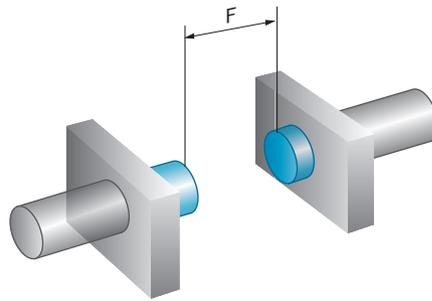
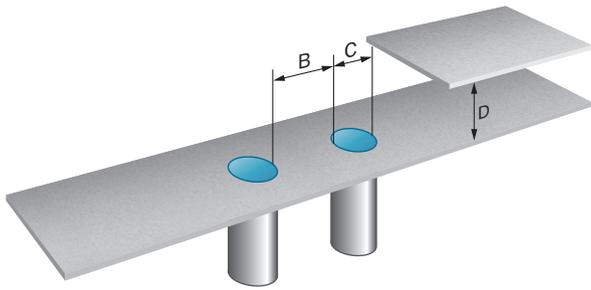
Classifications

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

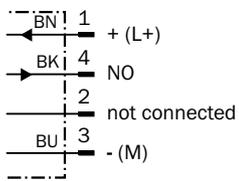
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
CCC certificate	✓
cULus certificate	✓
ECE test certificate	✓

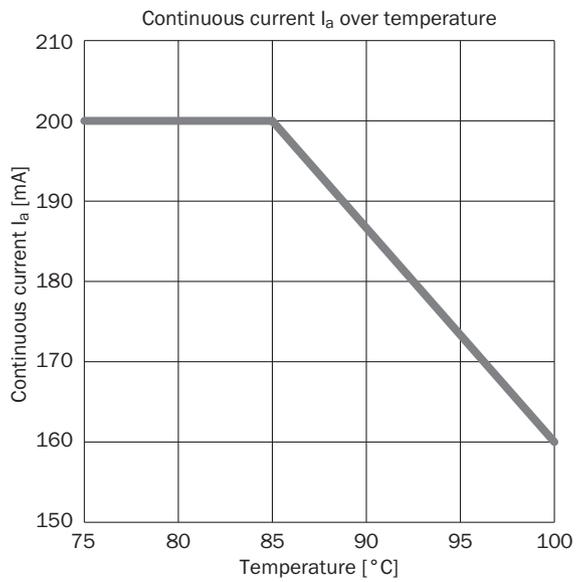
Installation note Flush installation



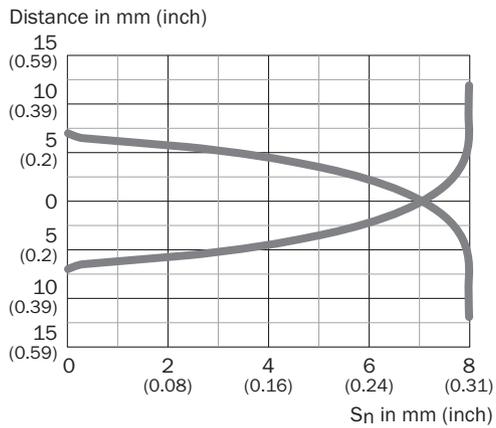
Connection diagram Cd-007



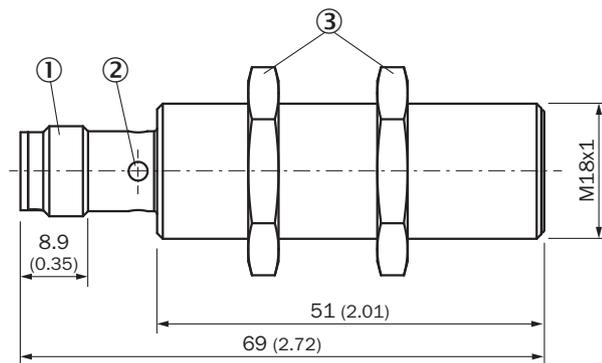
Temperature derating



Response diagram



Dimensional drawing IMS18, flush



Dimensions in mm (inch)

- ① Connection
- ② Display LED
- ③ fastening nuts (2x); width across 24, brass nickel-plated

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Plate N06N for universal clamp bracket, M18 Material: Stainless steel, stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: MH15, MH15V, V180-2, V18V, W15, GR18, V18, V18 Laser, V12-2, SimpleSense, SureSense, M18 round sensors 	BEF-KHS-N06N	2051622
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Description: Mounting bracket for M18 sensors Material: Stainless steel Details: Stainless steel Items supplied: Without mounting hardware 	BEF-WN-M18N	5320947
connectors and cables			
	<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: Uncontaminated zones, Zones with chemicals 	YF2A14-050VB3XLEAX	2096235
	<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, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Drag chain operation, 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