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Product data sheet



IMC18-07BPDZC0SA05

SAM

INDUCTIVE PROXIMITY SENSORS

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INDUCTIVE PROXIMITY SENSORS



Illustration may differ

Ordering information

Type	Part no.
IMC18-07BPDZC0SA05	1061987

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

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

Detailed technical data

Features

Housing	Cylindrical thread design
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S_n	7 mm
Safe sensing range S_a	5.6 mm
Installation type	Flush
Connection type	Male connector M12, 4-pin
Switching output	PNP
Output Q_{Imp}	Pulse output (pulse train corresponds to the activation rate)
Output Q	Output type (dependant on the adjusted threshold)
Output function	NO
Electrical wiring	DC 4-wire
Speed range, adjustable via two thresholds	6 ... 12,000 pulses/min [1]
Acceleration range, adjustable	0.1 ... 2 pulses/s² [2]
Time delay, adjustable	Mode 0: No start-up delay Mode 1: 0...254 s, configurable Mode 2: When reaching the upper threshold
Enclosure rating	IP67 [3]
Special features	Speed monitor

[1] Up to a max. pulse sequence of 12,000 pulses / min.

[2] Up to a max. pulse sequence of 1.200 pulses / min.

[3] According to EN 60529.

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Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 %
Voltage drop	≤ 2.5 V [1]
Hysteresis	5 % ... 15 % [2]
Reproducibility	≤ 2 % [3] [4]
Temperature drift (of S_r)	± 10 %
EMC	According to EN 60947-5-2
Continuous current I_a	≤ 100 mA
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms/10 Hz ... 55 Hz, 1 mm
Status indicator Q_{Imp}	LED, yellow
Status indicator Q	LED, blue
Ambient operating temperature	–25 °C ... +75 °C
Housing material	Brass, nickel-plated
Sensing face material	Plastic, LCP
Housing length	69 mm
Thread length	52 mm
Tightening torque, max.	≤ 40 Nm
Items supplied	Mounting nut, brass, nickel-plated (2x)
Minimum response time	Mode speed monitoring 50 ms Mode acceleration monitoring 1 sec

[1] At I_a max.
[2] Of S_n.
[3] Ub and Ta constant.
[4] Of Sr.

Safety-related parameters

$MTTF_D$	1,046 years
DC_{avg}	0 %

Communication interface

Communication interface	IO-Link V1.0
Communication Interface detail	COM2 (38,4 kBaud)
Cycle time	5 ms
Process data length	16 Bit
Process data structure	14 bit measured value 1 bit pulse output 1 bit switching output
Factory setting	Operating mode: acceleration monitoring Upper/lower threshold speed: 200/300 pulses/min Threshold acceleration: 1 pulse/sec² Start-up delay mode: time delay Time delay: 5 sec

Reduction factors

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	0.8
Aluminum (Al)	0.45
Copper (Cu)	0.4
Brass (Br)	0.4

Installation note

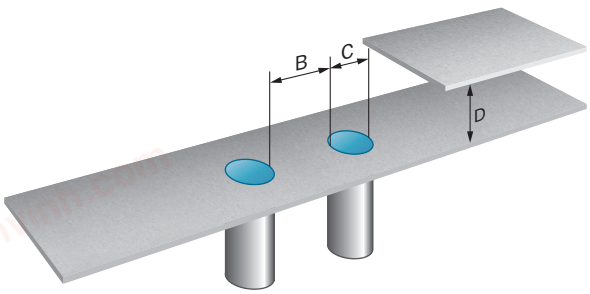
Remark	Associated graphic see "Installation"
B	18 mm
C	18 mm
D	18 mm
F	56 mm

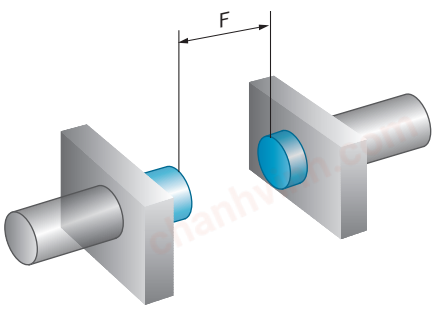
Classifications

ECl@ss 5.0	27270101
ECl@ss 5.1.4	27270101
ECl@ss 6.0	27270101
ECl@ss 6.2	27270101
ECl@ss 7.0	27270101
ECl@ss 8.0	27270101
ECl@ss 8.1	27270101
ECl@ss 9.0	27270101
ECl@ss 10.0	27270101
ECl@ss 11.0	27270101
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC 16.0901	39122230

Installation note

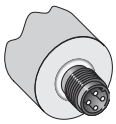
Flush installation





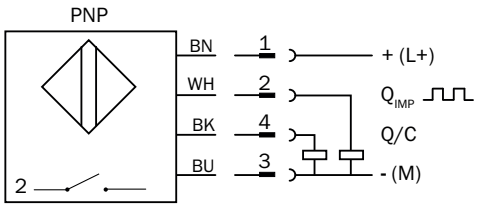
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Connection type



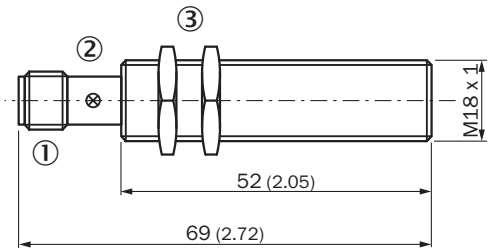
Connection diagram

Cd-226



Dimensional drawing (Dimensions in mm (inch))

IME18 Standard, connector, flush



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

Recommended accessories

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

	Brief description	Type	Part no.
Fieldbus modules			
	Number of IO-Link ports: 4; Communication mode: COM1/COM2; IO-Link version: IO-Link V1.0; Switching input: PNP; Supply voltage Vs, IO-Link ports: DC 24 V; Current loading: 800 mA; Data transmission rate: Max. 12 MBaud, Autobaud; Address space occupation: 1 bis 126; Connection type: Connector M12; Connection type, IO-Link ports: Connector M12, 5-pin; Suppyl voltage Vs, module: DC 18 ... 30 V; Power consumption: Typ. 75 mA / max. 100 mA (at UL with DC 24 V), Typ. 25 mA + sensor current / max. 80	IOLSHPB-P3104R01	6039728
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

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INDUCTIVE PROXIMITY SENSORS

	Brief description	Type	Part no.
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
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A14-020UB3XLEAX	2095607
	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, PUR, halogen-free, unshielded, 5 m	YF2A14-050UB3XLEAX	2095608
	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, PUR, halogen-free, unshielded, 2 m	YG2A14-020UB3XLEAX	2095766
	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, PUR, halogen-free, unshielded, 5 m	YG2A14-050UB3XLEAX	2095767
	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
	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
Terminal and alignment brackets			
	Mounting bracket with ball-and-socket, plastic, mounting hardware included	BEF-WN-M18-ST02	5312973
	Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KH-M18	2051481
	Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KHF-M18	2051482

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Recommended services

Additional services ➜ www.sick.com/SAM

	Type	Part no.
Function Block Factory		
• **Description:** The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&R. More information on the FBF can be found here.	Function Block Factory	On request

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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:

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