



Inductive proximity sensors
Inductive MultiTask sensors, SAM M30

IMC30-10BPDZCOSA05



Model Name > [IMC30-10BPDZC0SA05](#)
Part No. > [1061704](#)



At a glance

- Speed and acceleration monitoring
- Monitoring range: 6 to 12,000 pulses/min. and 0.1 to 2 pulses/sec.²
- Switching and pulse output
- Intelligent start-up delay
- Speed monitoring can be flexibly configured via two thresholds
- Flexible sensor settings, monitoring, extended diagnostics, and visualization thanks to IO-Link
- Sensing range: 10 mm flush
- Type M30

Your benefits

- Speed-independent detection of speed changes
- Faster detection of speed changes than conventional speed monitors
- No readjustment after speed changes necessary
- Precise and convenient configuration via software
- IO-Link provides easy data access from the PLC
- No time-consuming, individual configuration of start-up delay feature necessary
- Reliable output signal thanks to adjustable speed thresholds (hysteresis)
- No expensive counter cards necessary in PLC



Features

Design:	Cylindrical
Thread size:	M30 x 1.5
Sensing range Sn:	10 mm
Assured sensing range Sa:	8.1 mm
Installation type:	Flush
Output type:	PNP
Output function:	NO
Electrical wiring:	DC 4-wire
Enclosure rating:	IP 67 ¹⁾
Connection type:	Connector M12, 4-pin
Output Q Imp:	Pulse output (The pulse sequence corresponds to the damping frequency)
Output Q:	Output type (dependant on the adjusted threshold)
Speed range, adjustable via two thresholds:	6...12,000 impulses/min ²⁾
Acceleration range, adjustable:	0.1...2 impulses/sec ² ³⁾

Time delay, adjustable: Mode 0: No start-up delay
 Mode 1: 0...254 sec., adjustable
 Mode 2: When reaching the upper threshold

1) According to EN 60529 2) Up to a max. pulse sequence of 12,000 pulses/min 3) Up to a max. pulse sequence of 1.200 pulses/min

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC
Ripple:	≤ 10 %
Voltage drop:	≤ 2.5 V ¹⁾
Power consumption:	≤ 35 mA ²⁾
Hysteresis:	5 % ... 15 % ³⁾
Repeatability:	≤ 2 % ^{4) 5)}
Temperature drift (of Sr):	± 10 %
EMC:	According to EN 60947-5-2
Output current I _a :	≤ 100 mA
Wire-break protection:	0
Short-circuit protection:	✓
Reverse polarity protection:	✓
Power-up pulse protection:	✓
Shock and vibration resistance:	30 g, 11 ms/10 Hz ... 55 Hz, 1 mm
Ambient temperature operation:	-25 °C ... +75 °C
Housing material:	Metal, Nickel-plated brass
Housing cap material:	Plastic, PA6
Housing length:	69 mm
Thread length:	52 mm
Tightening torque, max.:	≤ 100 Nm
Status indicator QImp:	LED, yellow
Status indicator Q:	LED, blau
Minimum response time:	Mode acceleration monitoring 1 sec, Mode speed monitoring 50 ms
Factory setting:	Operating mode: acceleration monitoring, Threshold acceleration: 1 pulse/sec ² , Start-up delay mode: time delay, Upper/lower threshold speed: 200/300 pulses/min, Time delay: 5 sec
Fieldbus integration:	IO-Link V1.0
Mode:	COM 2 (38k4)
Cycle time:	5 ms
Process data length:	16 Bit
Process data structure:	1 bit pulse output, 1 bit switching output, 14 bit measured value

1) At I_a max 2) Without load 3) Of S_n 4) U_b and T_a constant 5) Of Sr

Reduction factors

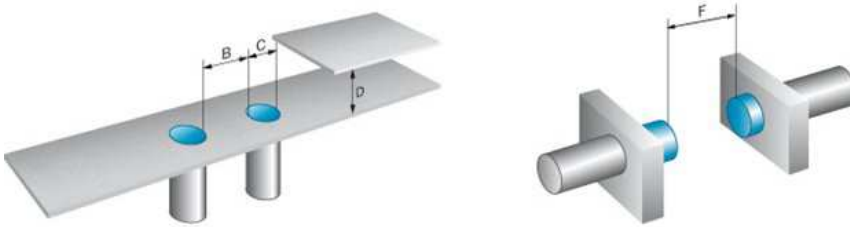
Note:	The values are reference values which may vary
Carbon steel St37 (Fe):	1
Stainless steel (V2A, 304):	0.8
Copper (Cu):	0.4
Aluminum (Al):	0.45
Brass (Br):	0.4

Installation note

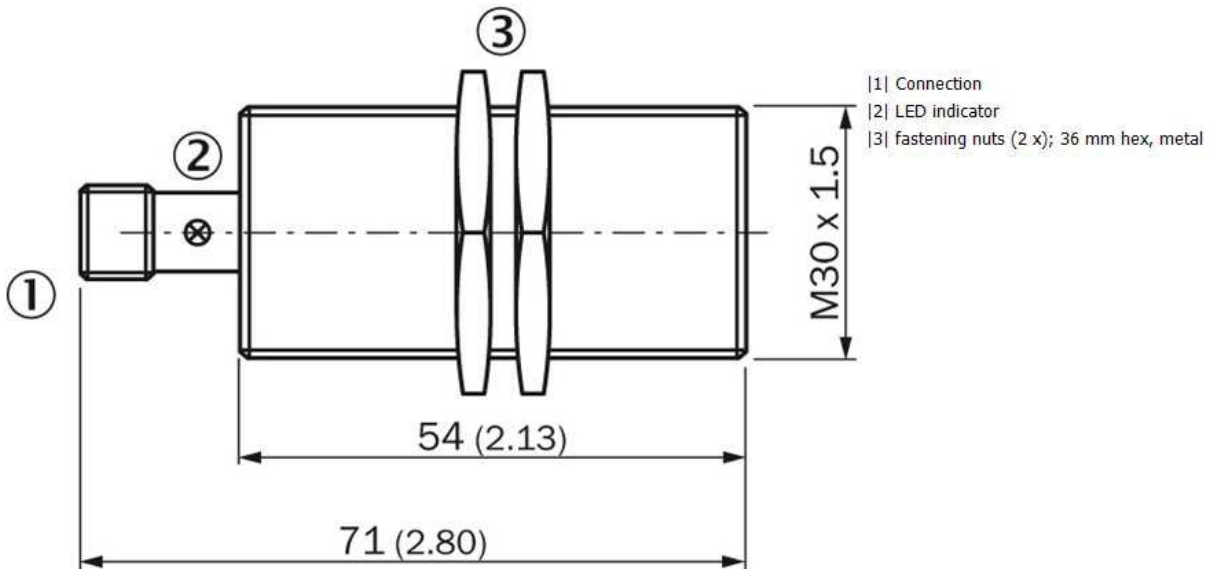
B:	30 mm
C:	30 mm

D: 30 mm
F: 80 mm
Remark: Associated graphic see "Installation"

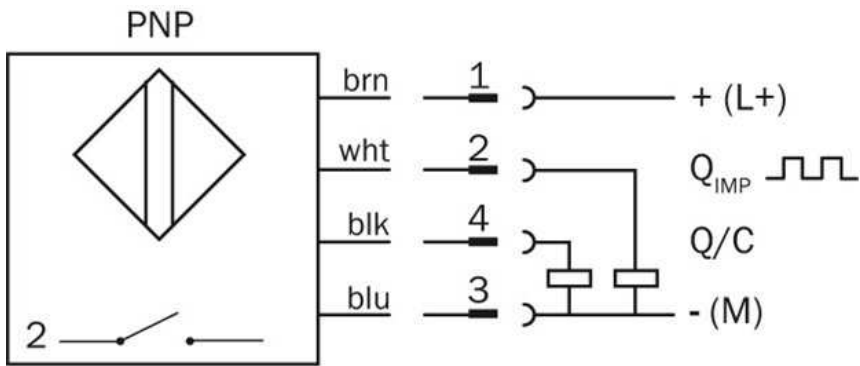
Installation note



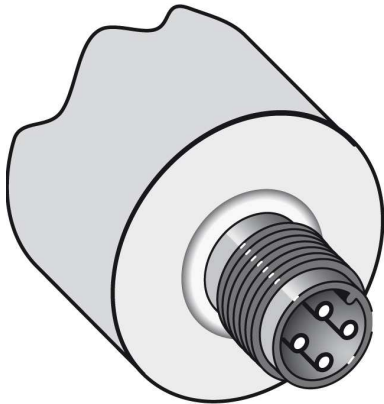
Dimensional drawing



Connection diagram



Connection type



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