Inductive Sensor
Ring sensor
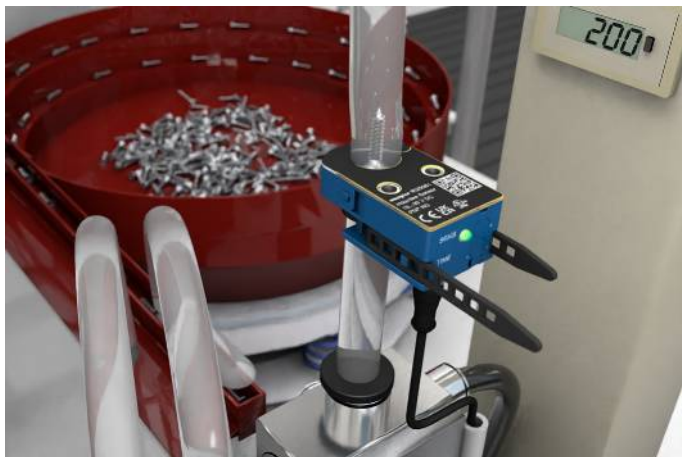
IR2D001
Part Number

- **Correction factor 1**
- **Flexible soft binder on the sensor**
- **Intuitive operating concept with IO-Link interface**
- **Plug and Play**
- **Separable housing**

Technical Data

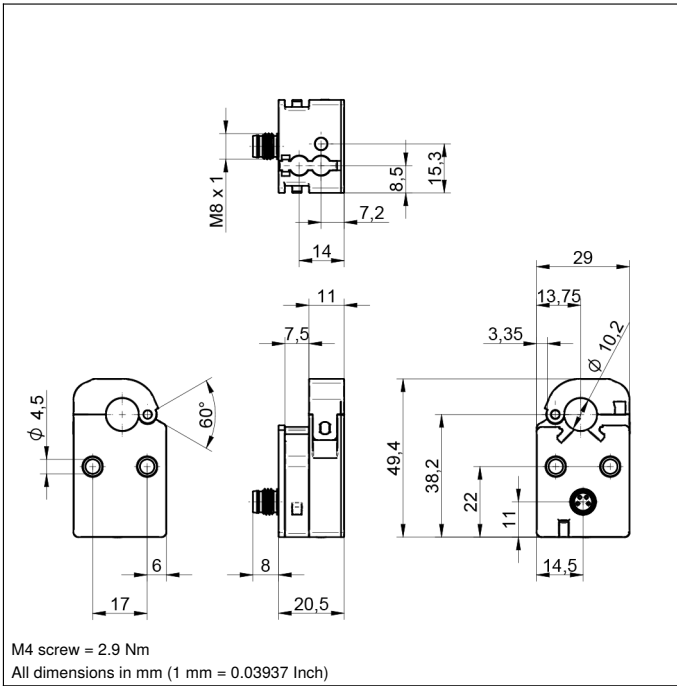| Inductive Data	
Inside diameter	10,2 mm
Installation A/Bx/By/C in mm	0/15/35/5
Installation A/Bx/By/C in mm with frequency switching	0/0/0/5
Functional principle	Dynamic
Smallest recognizable object (Ø)	2 mm*
Correction Factors Stainless Steel V2A/CuZn/Al	1/1/1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 20 mA
Object speed	< 50 m/s
Response Time	< 300 µs
Ready-state delay	< 1 s
Switching Output Voltage Drop	1,5 V
Temperature Range	0...60 °C
Short Circuit Protection	yes
Reverse Polarity and Overload Protection	yes
Switching Output/Switching Current	100 mA
Pulse extension	200 ms
Interface	IO-Link V1.1
Mechanical Data	
Connection	M8 × 1; 4-pin
Setting Method	Potentiometer/IO-Link
Hanger opening/closing cycles	Max. 100
Degree of Protection	IP54
Packaging unit	1 Piece
PNP NO	●
Connection Diagram No.	271
Control Panel No.	T19

* Relates to a steel ball

The inductive ring sensor with separable housing enables quick and flexible mounting on various objects, such as tubes. The compact format with a status light visible on all sides and a cable outlet in the hose direction is particularly well suited for confined spaces. It is intuitive to operate via the potentiometer or the IO-Link interface. The sensor switches independently of the material thanks to correction factor 1. Frequency switching enables the operation of several sensors in the immediate vicinity without any reciprocal influence.
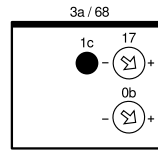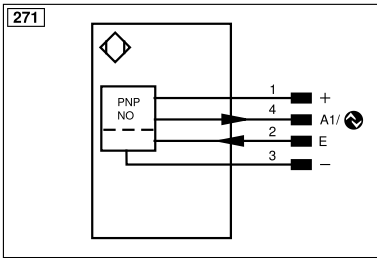
Ctrl. Panel

3a / 68

0b = Pulse length adjuster
17 = Sensitivity Adjustment
1c = Status display/setup aid
3a = Switching Status Indicator/Error Indicator
68 = supply voltage indicator

M4 screw = 2.9 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

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Legend						
+	Supply Voltage +	nc	Not connected	EN$_{BRS422}$	Encoder B/$\bar{B}$ (TTL)
–	Supply Voltage 0 V	U	Test Input	EN$_A$	Encoder A
~	Supply Voltage (AC Voltage)	$\bar{U}$	Test Input inverted	EN$_B$	Encoder B
A	Switching Output (NO)	W	Trigger Input	A$_{MIN}$	Digital output MIN
$\bar{A}$	Switching Output (NC)	W–	Ground for the Trigger Input	A$_{MAX}$	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	A$_{OK}$	Digital output OK
$\bar{V}$	Contamination/Error Output (NC)	O–	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	A$_{MV}$	Valve Output	O$_{LT}$	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY–	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⏚	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
⊘	IO-Link	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower over Ethernet	Tx+/–	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN$_0$ $_{RS422}$	Encoder 0-pulse 0/$\bar{0}$ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	EN$_{ARS422}$	Encoder A/$\bar{A}$ (TTL)		

Mounting