



Magnetic Cylinder Sensors

Magneto-inductive position sensors for analog position measurement

Magneto-inductive position sensors for analog position measurement can be quickly and easily installed in T-slots. They detect end positions and intermediate positions individually and flexibly. The magneto-inductive position sensor Micro-BIL provides non-contact and absolute measurement on pneumatic miniature grippers or compact cylinders with integrated permanent magnets.



Magneto-inductive Position Sensors for Analog Position Measurement

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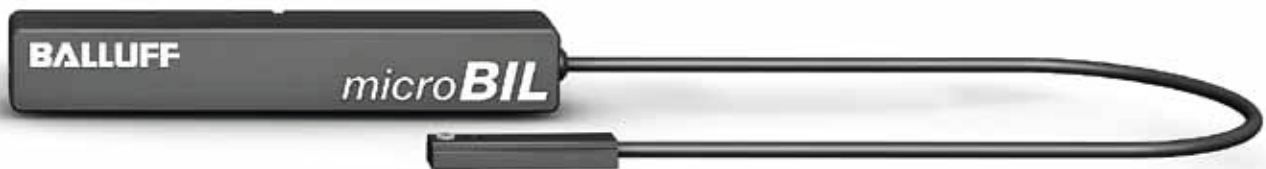
Magneto-inductive Position Sensors for Analog Position Measurement

Micro-BIL

877



Basic information and definitions can be found on **page 934**.



The Micro-BIL provides absolute measurement of the positions on pneumatic miniature grippers or compact cylinders with integrated permanent magnets. Moreover, the sensor element can be installed in the T-slot very easily. The analog output signal enables individual and flexible detection of end positions and intermediate positions on gripper jaws or pistons.

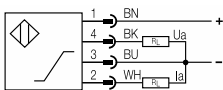
Features

- Wear-free since the measuring position is detected without contact
- Insensitive to shock and vibration
- Absolute output signal: Voltage or current (cable break monitoring possible)
- Adjustable measuring range / magnetic field strength
- Easiest installation in the T-slot

A button enables adjustment to various magnetic field strengths. The technical data refer to reference measurements. Different grippers/cylinders having differing magnetic fields may affect the technical data.

Original mounting brackets and screws are recommended for attaching the Micro-BIL. Please order accessories separately.

Wiring diagram



Connect either the voltage or current output.



Magneto-inductive Position Sensors Micro-BIL



Model	Micro-BIL
Output signal U_{out}/I_{out}	Voltage 0...10 V / current 4...20 mA
Working range s_w /linear range s_l	0...10 mm
Ordering code	BIL0002
Part number	BIL ED0-B010P-02/30-S75
Supply voltage U_S	For voltage output U_o : $U_S = 15...30$ V DC, for current output I_o : $I_S = 10...30$ V DC
Field strength, axial H_n	10 kA/m typical
-3dB width of the axial field distribution, typical	2.5 mm
Residual ripple	$\leq 10\%$ of U_e
Rated insulation voltage U_i	75 V DC
Effective distance s_e	5 mm
Load resistance R_L	For voltage output U_o : $R_L = \geq 2$ k Ω , at current output I_o : $R_L = \leq 500$ Ω ,
No-load supply current I_o at U_e	≤ 30 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes
Ambient temperature T_a	-10...+70 °C
Repeat accuracy R_{BWN}	$\leq \pm 30$ μ m
Non-linearity max.	$\leq \pm 0.3$ mm
Temperature coefficient	Typical
TK, in the optimum range	min. +4 μ m/K max. +2 μ m/K
from +10...+50 °C	max. +10 μ m/K
Power-on/programming indicator	Yes/Yes
Degree of protection as per IEC 60529	IP 67
Approvals	CE, cULus
Material	Housing: PA (fiberglass reinforced) Sensing surface: PBT
Connection	M8 connector, 4-pin



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Magnetic Cylinder Sensors with Mounting System

Magnetic Cylinder Sensors with a Compact Design

Magnetic Cylinder Sensors with Special Properties

Magnetic Sensors for Object Detection

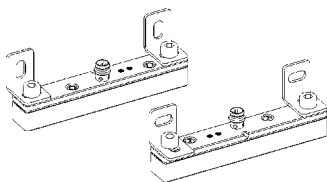
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Accessories for Magnetic Cylinder Sensors

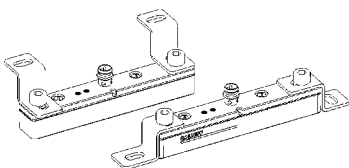
Basic information and definitions can be found on page 980.

Mounting bracket, stainless steel:

BIL 01-HW-1 (BAM00K4)



BIL 01-HW-2 (BAM00K5)



BIL 01-HW-3 (BAM00K6)

