INSTALLATION GUIDE

Magnetostrictive Sensor Series MAB

For more information please see the data sheet at
www.waycon.biz/products/magnetostrictive-transducers/

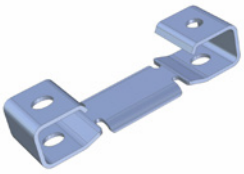
FIRST STEPS

WayCon Positionsmesstechnik GmbH would like to thank you for the trust you have placed in us and our products. This manual will make you familiar with the installation and operation of our magnetostrictive sensors. Please read this manual carefully before initial operation!

Unpacking and checking:
Carefully lift the device out of the box by grabbing the housing. After unpacking the device, check it for any visible damage as a result of rough handling during the shipment. Check the delivery for completeness.
If necessary consult the transportation company, or contact WayCon directly for further assistance.

MOUNTING THE SENSOR

Brackets (please order separately)
1 set includes 2 brackets. We recommend to use 1 set for each 250 to 300 mm of the measurement range.



Code: PKIT091
Material: steel
Distance between mounting holes: 50 mm
Overall length: 63.5 mm
Mounting screws: M5

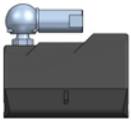
MAGNETIC CURSOR

Magnetic Cursor (please order separately)
PCUR045: Standard version.
Guided sliding, axial joint, low
PCUR046: Guided sliding, axial joint, high
PCUR047: Guided sliding, angled joint
PCUR068: Unguided floating.
The adjustment has to be done 2...7 mm above the MAB-Profile. Allowed lateral deviation ±2 mm.
Installation only on a support made of non-magnetic material.
2 cursors: min. distance 75 mm

PCUR045

PCUR046

PCUR047



PCUR068

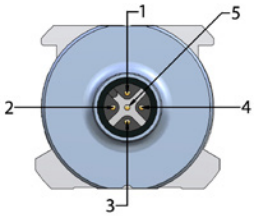
For strokes > 2500 mm use sliding or floating cursors with max. distance of 4 mm above the profile.

ELECTRICAL CONNECTION

The transducer case must be grounded with the cable sheathing on the control system side only.

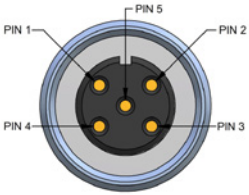
Analog output

Supply: 24 VDC, ±20 %



Function	PIN
Output magnetic cursor 1	1
GND output magnetic cursor 1, 2, speed	2
Inverse output:	
Output magnetic cursor 2, speed	3
power supply GND	4
power supply +	5

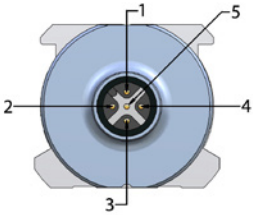
Cable for analog output, connector M12, 5 pole	
K5P2M-S-M12	2 m, connector, straight, IP67, shielded
K5P5M-S-M12	5 m, connector, straight, IP67, shielded
K5P10M-S-M12	10 m, connector, straight, IP67, shielded
K5P2M-SW-M12	2 m, connector, angular, IP67, shielded
K5P5M-SW-M12	5 m, connector, angular, IP67, shielded
K5P10M-SW-M12	10 m, connector, angular, IP67, shielded



PIN	Cable colour
1	brown
2	white
3	blue
4	black
5	grey

CANopen output

Supply: 24 VDC, ±20 %
Baud rate: 500 kBaud
Interface: CANopen DS-301 V4.01
Device Profile: DS-406 V2.0
Please also see supplement
„Additional Information CANopen".



Function	PIN
n.c.	1
Power + VDC	2
DC Ground	3
CAN H	4
CAN L	5

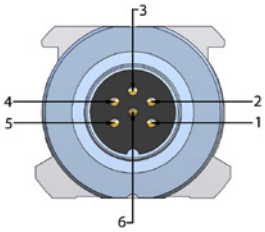
CANopen Data Protocol										
SOF	Arbitration		Control	Data Field	CRC	ACK			EOF	Interframe Space
1	11	1	6	0 - 8 Bytes	15	1	1	1	7	≥ 3 Bits

Type	Cursors	PD01 (Standard)	PD02 (Standard)
A	1	Position 4 Byte whole Speed 2 Byte whole Cams, 1 Byte whole	Absence of data
B	2	Position 1, 4 Byte whole Speed 2 Byte whole Cams 1 Byte whole	Position 2, 4 Byte whole speed 2 Byte whole Cams 1 Byte whole

ELECTRICAL CONNECTION

SSI output
Supply: 10...32 VDC

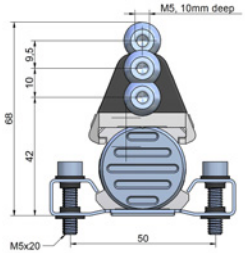
Please also see supplement
„Additional Information SSI“.

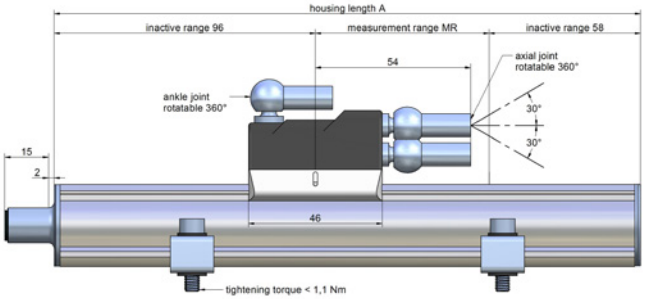


Function	PIN
Data -	1
Data +	2
Clock +	3
Clock -	4
Power Supply +	5
Ground	6

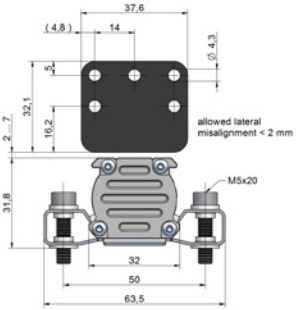
TECHNICAL DRAWING

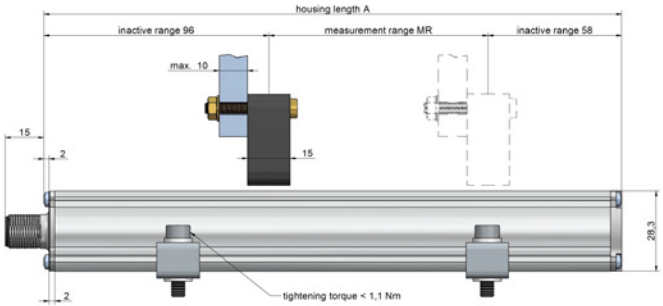
MAB: guided sliding cursor

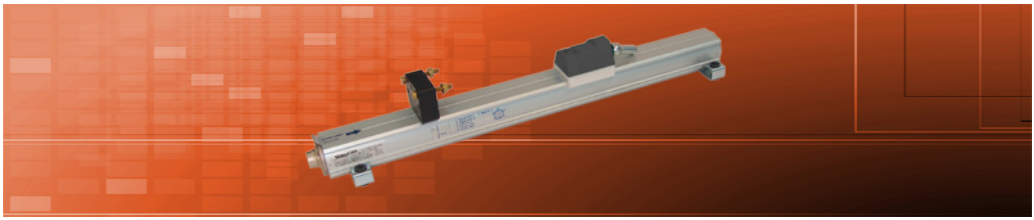




MAB: unguided floating cursor







TECHNICAL DATA

Useful electrical stroke	[mm]	50 to 300	350 to 1100	1200 to 2000	2250 to 3000	3250 to 4000
Sampling time MAB-A	[ms]	0.5	1	1.5	2	3
Sampling time MAB-C	[ms]	1		2	4	
Sampling time MAB-S	[ms]	1		2	4	
Dimensions MAB	[mm]	measurement range + 154				

NOTES

The transducer must be installed away from sources of magnetic fields, both static and dynamic. The connection cable must be wired separately from power cables and/or solenoid controls, drives, or remote switches. The line used for power supply must be dedicated to the transducers or must be drawn directly from the power terminals and as near as possible. When choosing a cursor for the MAB profile, remember that the transducer's cursor is a magnet. Therefore, if there are iron filings or small magnetic metal fragments in proximity of the transducer, avoid the use of sliding cursors, as there would be a risk of material accumulation on the cursor, creating problems for sliding. Use a floating cursor instead.

DECLARATION OF EC-CONFORMITY

WayCon Positionsmesstechnik GmbH
Mehlbeerenstrasse 4
82024 Taufkirchen / Germany

This is to certify that the products

Classification: Magnetostrictive Sensors
Series: MAB
fulfill the current request of the following EC-directives:
EMV-directive: 2004/108/EG (until April 19th 2016)
2014/30/EU (from April 20th 2016)
applied harmonized standards:
EN 61000-6-2:2005, EN 61000-6-4:2007, EN 61326-1:2006

The declaration of conformity loses its validity if the product is misused or modified without proper authorisation.

Taufkirchen, 24.02.2016

Andreas Täger, CEO