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.

GENERAL 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.
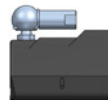
MAGNETIC CURSORS

Magnetic Cursors (please order separately)

Cursors for MAB-A / MAB-S	Cursors for MAB-C	Description
PCUR210	PCUR045	standard version; guided sliding, axial joint, low
PCUR211	PCUR046	guided sliding, axial joint, high
PCUR212	PCUR047	guided sliding, angled joint
PCUR202	PCUR068	unguided floating [1]

PCUR210 PCUR045

PCUR211 PCUR046

PCUR212 PCUR047

PCUR202 PCUR068

[1] 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.

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MOUNTING THE SENSOR

Brackets (please order separately)
1 set includes 2 brackets. We recommend to use 1 set for each 250...300 mm of the measurement range.
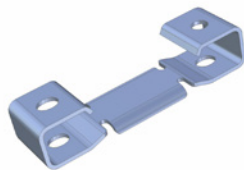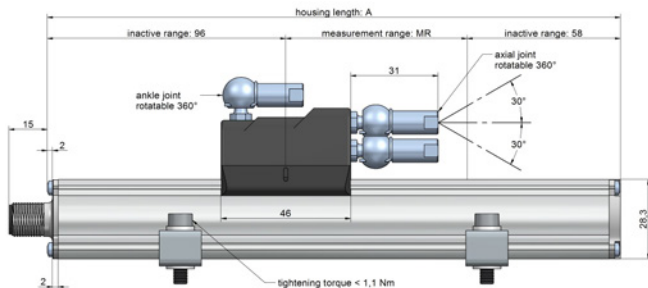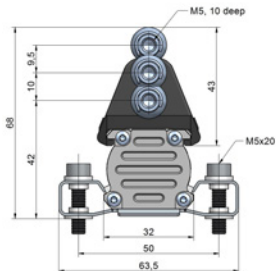
Code: PKIT091
Material: steel   Distance between mounting holes: 50 mm
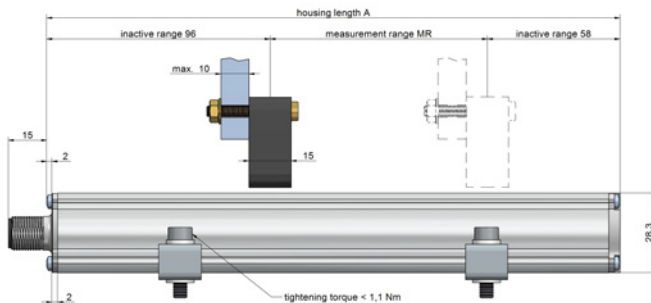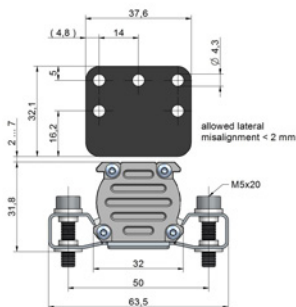Overall length: 63.5 mm   Mounting screws: M5

Sliding magnetic cursor

Floating magnetic cursor

A	[mm]	measurement range + 154

During installation, please observe the magnetically inactive range before and after the measurement range. The inactive range is 96 mm on the connector side and 58 mm on the front side.
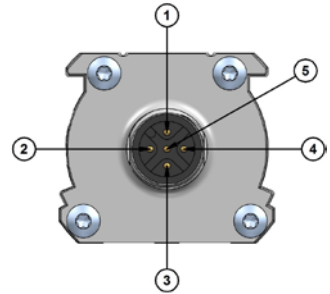
ELECTRICAL CONNECTION

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

MAB-A: analog output
Supply: 24 VDC, ±20 %

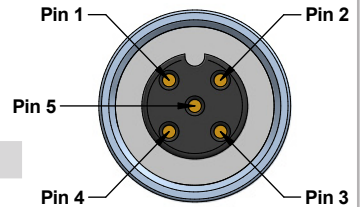| Function	Pin
Output magnetic cursor 1	1
GND output magnetic cursor 1, 2, speed	2
Inverse output:	
Output magnetic cursor 2, speed	3
Supply GND	4
Supply +	5

Connection cable analog output

Cable with mating connector M12, female, 5 pins, IP67	
K5PXM-S-M12	X m, straight connector, shielded
K5PXM-SW-M12	X m, angular connector, shielded

Pin	1	2	3	4	5
Cable colour	BN	WH	BU	BK	GY

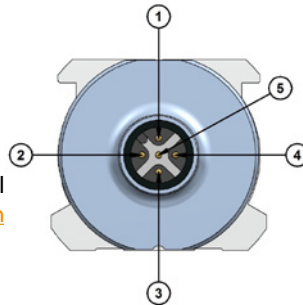### MAB-C: digital output CANopen
Supply: 24 VDC, ±20 %
Baud rate: 500 kBaud
Interface :   CANopen DS-301 V4.01
Device profile: DS-406 V2.0

More information on the CANopen digital output can be found in the manual CANopen MAB-C at www.waycon.biz/downloads.

Function	Pin
n. c.	1
Supply +	2
Supply GND	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 integer Speed 2 Byte integer Cams, 1 Byte integer	Absence of data
B	2	Position 4 Byte integer Speed 2 Byte integer Cams, 1 Byte integer	Position 4 Byte integer Speed 2 Byte integer Cams, 1 Byte integer

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ELECTRICAL CONNECTION

MAB-S: digital output SSI
Supply: 10...32 VDC
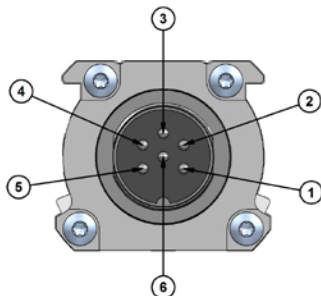
Function	Pin
Data -	1
Data +	2
Clock +	3
Clock -	4
Supply +	5
Supply GND	6

DECLARATION OF EU-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 EU-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