

MAGNETOSTRICTIVE TRANSDUCER



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Series MAP

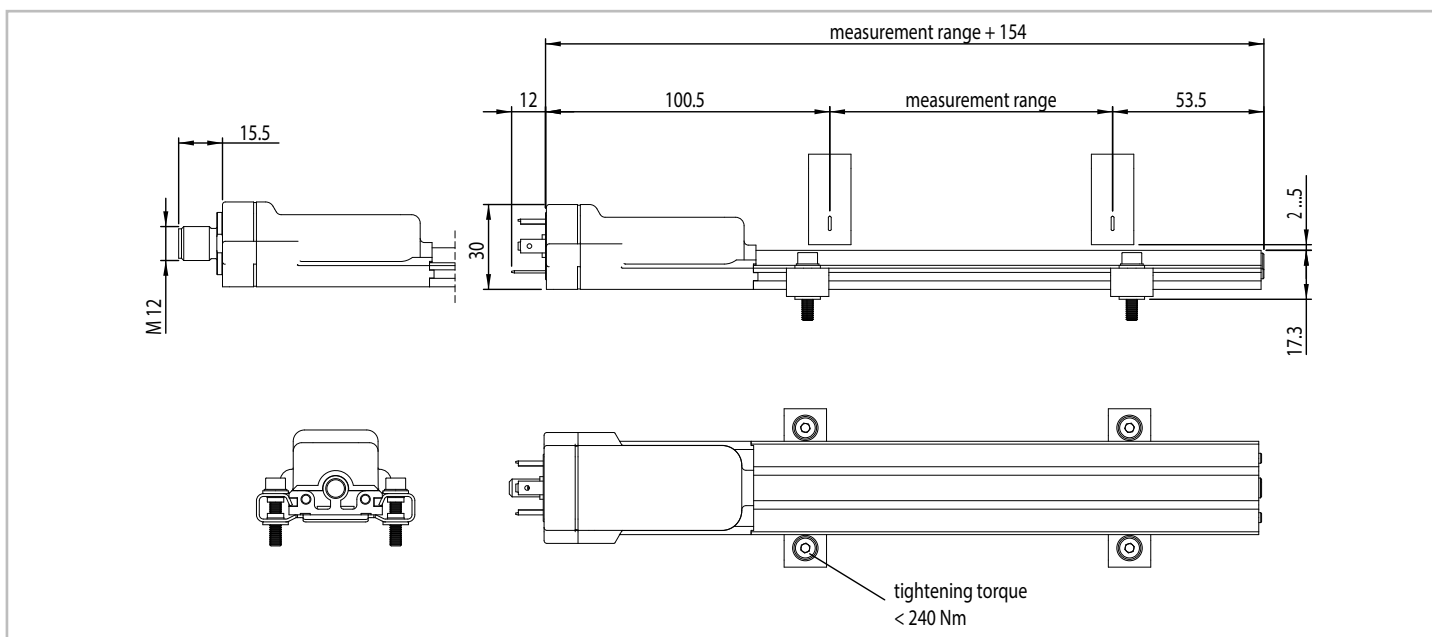
Key-Features:

- **Measurement ranges from 50 to 1500 mm**
- **Sliding or floating magnetic cursor**
- **Contactless measurement without wear**
- **Displacement speed up to 10 m/s**
- **Linearity up to $\leq \pm 0.04$ %**
- **Operating temperature -30...+75 °C**
- **Protection class IP65**
- **Analog output signals: 0.1...10.1 V or 4...20 mA**

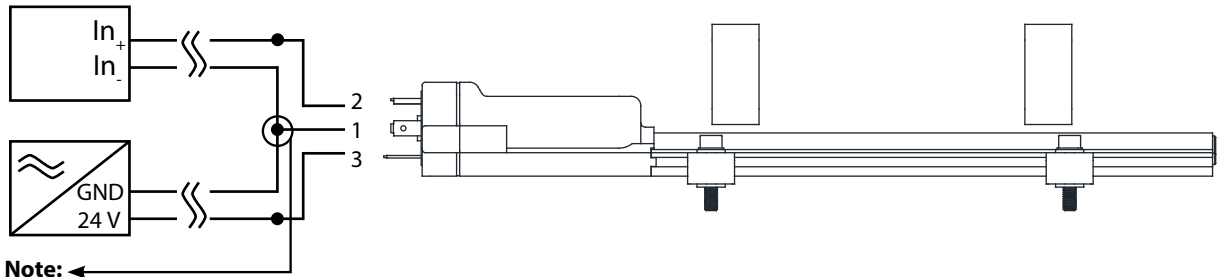
TECHNICAL DATA

Measurement range	[mm]	50 / 75 / 100 / 130 / 150 / 175 / 200 / 225 / 250 / 300 / 350 / 360 / 400 / 450 / 500 / 550 / 600 / 650 / 700 / 750 / 800 / 850 / 900 / 950 / 1000 / 1100 / 1200 / 1250 / 1300 / 1400 / 1500	
Displacement speed	[m/s]	≤10	
Acceleration max.	[m/s ²]	≤100	
Linearity	[%]	≤±0.04 (min. ±0.09 mm)	
Resolution		theoretically unlimited (limited by the quality of the power supply)	
Repeatability	[mm]	≤0.01	
Hysteresis	[mm]	≤0.02	
Sampling time position		Measurement range up to 600 mm: 1 ms Measurement range 650 to 900 mm: 1.5 ms Measurement range 950 to 1300 mm: 2 ms Measurement range from 1400 mm: 3 ms	
Output signal		0.1...10.1 V	4...20 mA
Output value max.		12 V	30 mA
Current consumption max.	[mA]	35	60
Output load max.	[kΩ]	≥10	0.05...0.5
Output signal in absence of cursor		10.5 V	21 mA
Power supply	[VDC]	24 ±20 %	
Power ripple max.	[VDC]	1	
Protection against polarity inversion		yes	
Protection against overvoltage		yes	
Protection against power supply in output		yes	
Electrical isolation	[V]	50	
Operating temperature	[°C]	-20...+75	
Storage temperature	[°C]	-40...+100	
Temperature coefficient		≤ 0.01 %/°C (min. 0.015 mm/°C)	
Protection class		IP67	
Shock resistance acc. DIN IEC68T2-27		100 g - 11 ms - single shock	
Vibration resistance acc. DIN IEC68T2-6		12 g / 10...2000 Hz	
Electrical connection		connector EN175301-803A, 4 pins or connector M12, 5 pins	

TECHNICAL DRAWING



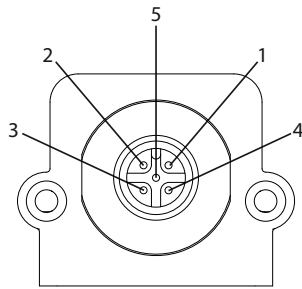
ELECTRICAL CONNECTION



Note: ←
Make the connection as close as possible to the transducer.

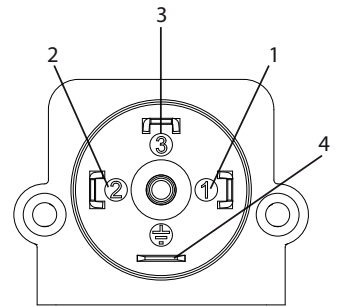
MAP-A-A connector M12, male, 5 pins

Function	Pin
Signal	1
GND _{Signal}	2
n. c.	3
GND _{Supply}	4
+V	5



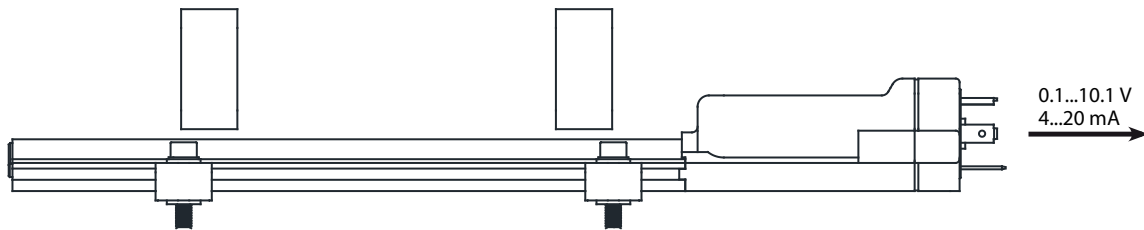
MAP-A-M connector EN175301-803 form A, 4 pins

Function	Pin
+V	1
Signal	2
GND	3
Shield	4



ANALOG OUTPUT

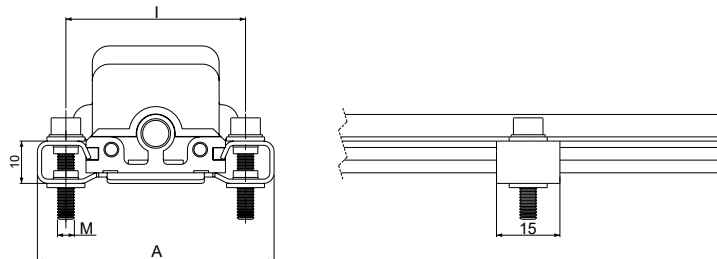
The MAP magnetostrictive transducers provide a direct voltage or current analog output proportional to the magnetic cursor's position. Since the output is direct, no signal electronic processing is required if interfaced with controllers or measurement instruments.



ACCESSORIES BRACKETS

Brackets (not included in delivery!)
1 set includes 2 brackets.

Set	Interaxis (I)	Screw (M)	Dimension (A)	Material
PKIT590	42.5 mm	M4	56 mm	steel
PKIT591	50 mm	M5	63.5 mm	steel

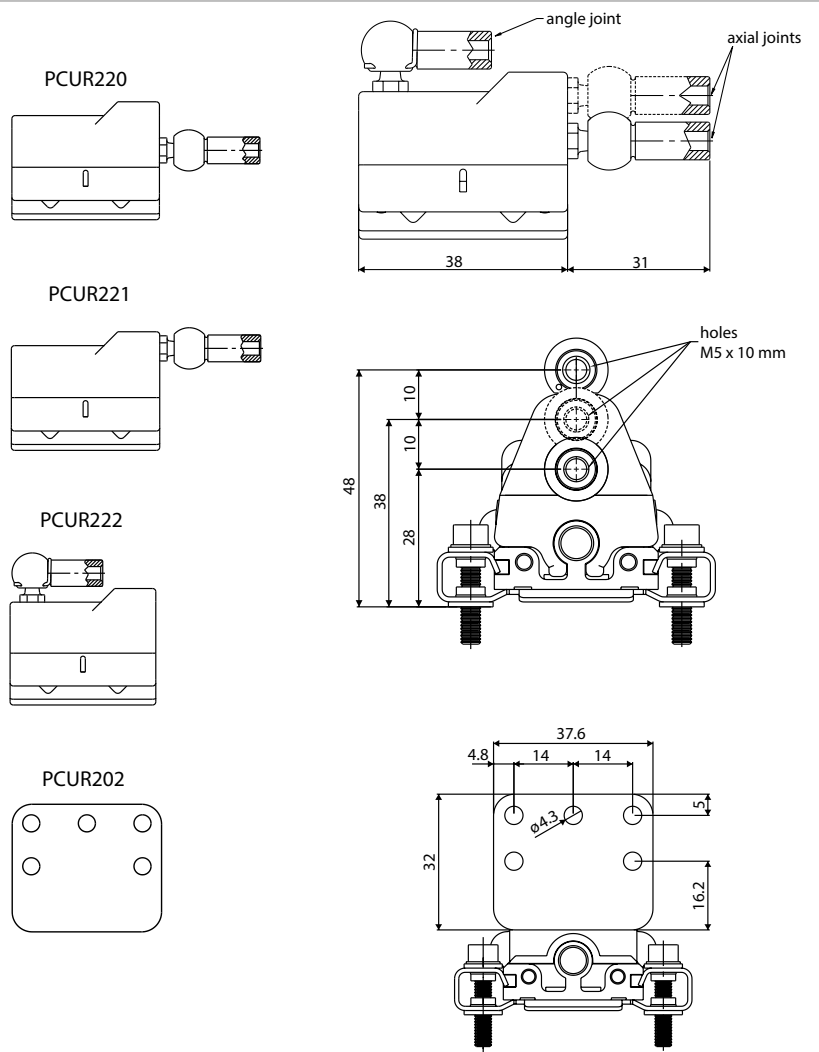


ACCESSORIES MAGNETIC CURSORS

Magnetic cursors (not included in delivery!)

Magnetic cursors	Description
PCUR220	standard version; guided sliding, axial joint, low
PCUR221	guided sliding, axial joint, high
PCUR222	guided sliding, angled joint
PCUR202	unguided floating

The adjustment has to be done 2...7 mm above the MAP-profile. Allowed lateral deviation ± 2 mm. Installation only on a support made of non-magnetic material.

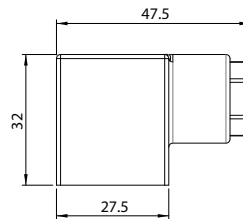


ACCESSORIES CABLES AND CONNECTORS

Mating connector für MAP-A-M

CON006:

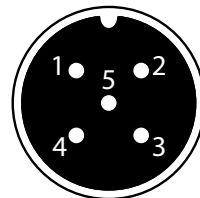
Connector, angular, for self assembly, IP65,
4 pins, PG9 cable gland for cable \varnothing 6...8 mm



Connection cable for MAP-A-A

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	cable colour
1	BN
2	WH
3	BU
4	BK
5	GY

ORDER CODE

MAP - - - -

Output type Analog output	A		Output signal 0.1...10.1 V 4...20 mA
Connection Connector, 4 pins, EN175301-803 A Connector M12, 5 pins	M A		Measurement range [mm] e. g. 50 see „Technical Data“

ACCESSORIES

Magnetic cursors

PCUR220	guided sliding, axial joint, low
PCUR221	guided sliding, axial joint, high
PCUR222	guided sliding, angled joint
PCUR202	unguided floating

Cable with mating connector M12 (female)

K5P2M-S-M12	2 m, straight connector, 5 pins, shielded
K5P5M-S-M12	5 m, straight connector, 5 pins, shielded
K5P10M-S-M12	10 m, straight connector, 5 pins, shielded
K5P2M-SW-M12	2 m, angular connector, 5 pins, shielded
K5P5M-SW-M12	5 m, angular connector, 5 pins, shielded
K5P10M-SW-M12	10 m, angular connector, 5 pins, shielded

Digital displays for sensors with analog output, 2 channel

WAY-AX-S	touch screen, supply: 18...30 VDC
WAY-AX-S-AC	touch screen, supply: 115...230 VAC

For more information and options please refer to the [WAY-AX data sheet](#).

Mounting sets

PKIT590	Brackets (2 pieces), bore distance 42.5 mm
PKIT591	Brackets (2 pieces), bore distance 50 mm

Connector (female) for self assembly

CON006	connector, 4 pins, angular, for MAP-A-M
D5-G-M12-S	straight connector M12, 5 pins, IP67, for MAP-A-A
D5-W-M12-S	angular connector M12, 5 pins, IP67, for MAP-A-A

Subject to change without prior notice.

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