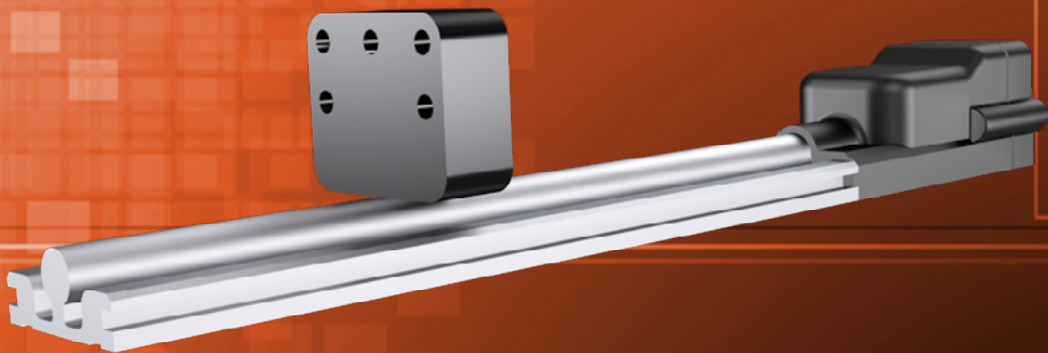


# MAGNETOSTRICTIVE TRANSDUCER



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## Series MAP

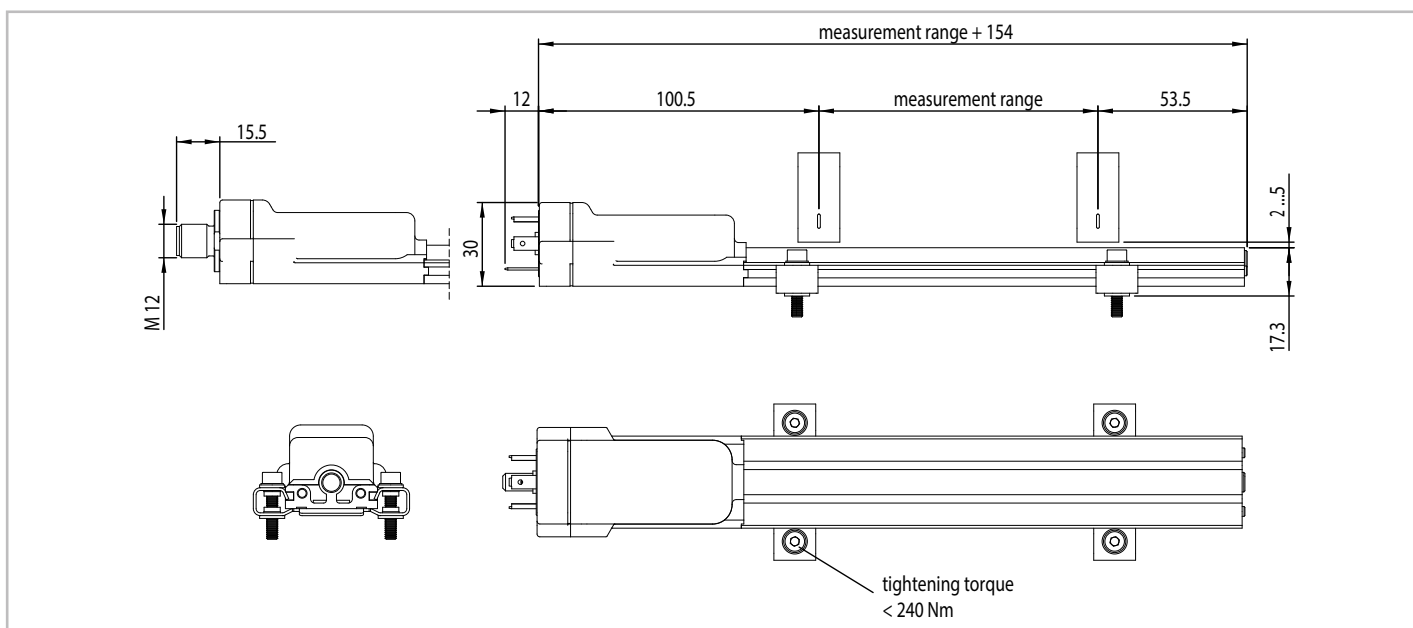
### Key-Features:

- 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

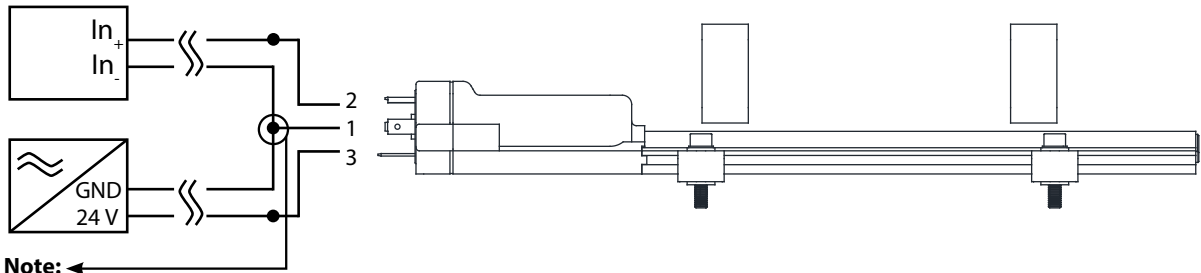
## TECHNICAL DATA

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 <sup>2</sup> ]	≤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



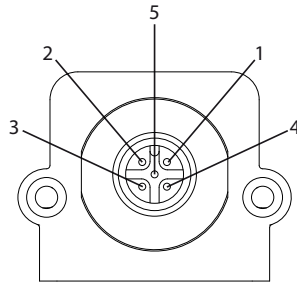
## ELECTRICAL CONNECTION



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

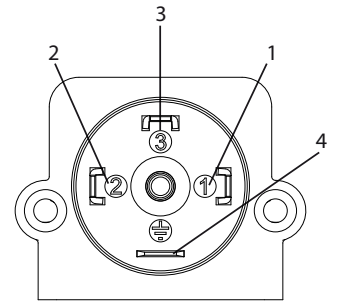
**MAP-A-A**  
connector M12, male, 5 pins

Function	Pin
Signal	1
GND <sub>Signal</sub>	2
n. c.	3
GND <sub>Supply</sub>	4
+V	5



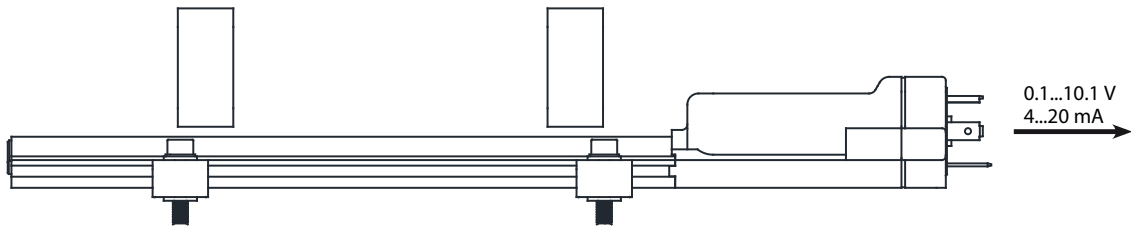
**MAP-A-M**  
connector EN175301-803 form A, 4 pins

Function	Pin
+V	1
Signal	2
GND	3
Shield	4



## ANALOG OUTPUT

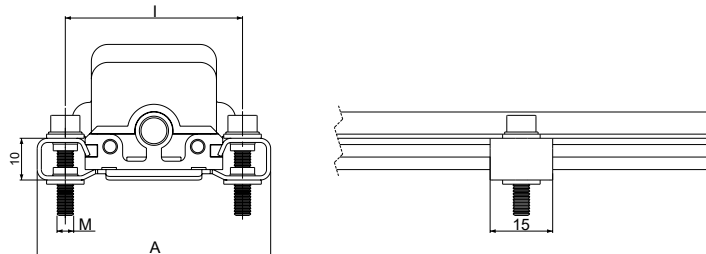
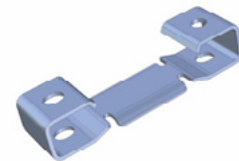
The MAP magnetostrictive transducers provide a direct voltage or current analog output proportional to the magnetic cursor's position. Since the output is direct, no signal electronic processing is required if interfaced with controllers or measurement instruments.



## 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

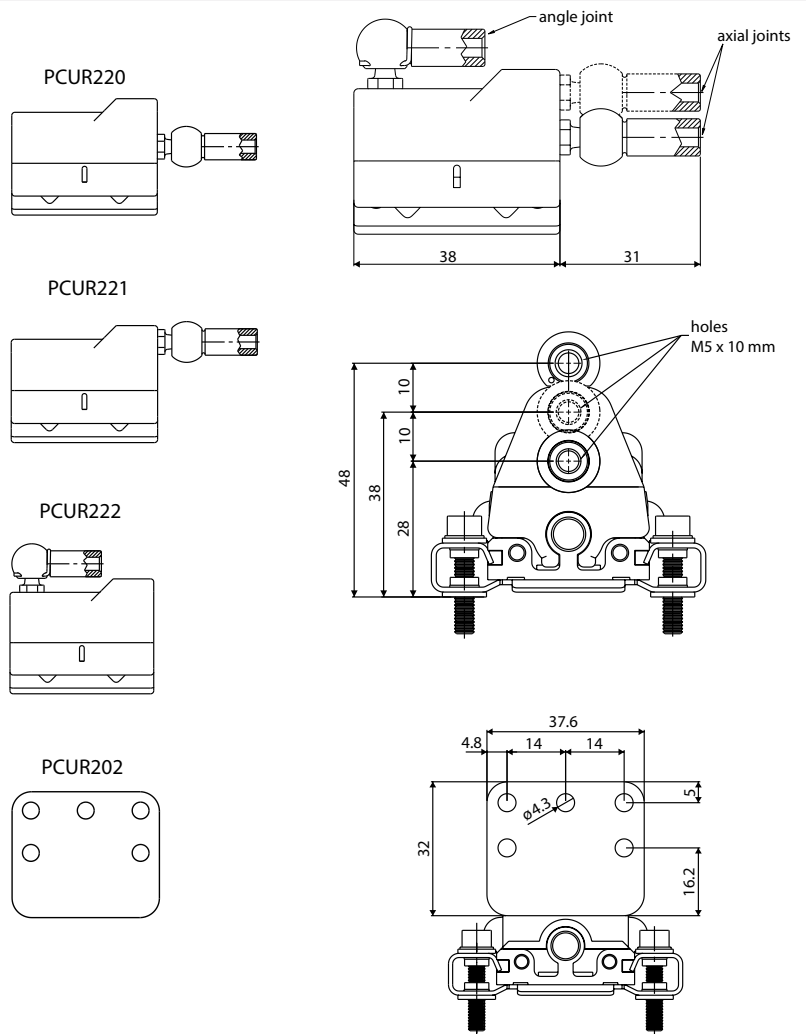


## ACCESSORIES MAGNETIC CURSORS

**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  $\pm 2$  mm. Installation only on a support made of non-magnetic material.

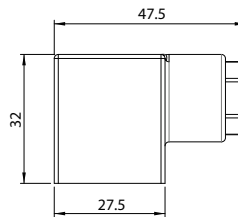


## ACCESSORIES CABLES AND CONNECTORS

**Mating connector für MAP-A-M**

**CON006:**

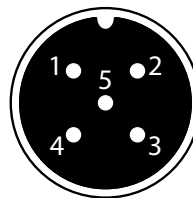
Connector, angular, for self assembly, IP65, 4 pins, PG9 cable gland for cable  $\varnothing$  6...8 mm



**Connection cable for MAP-A-A**

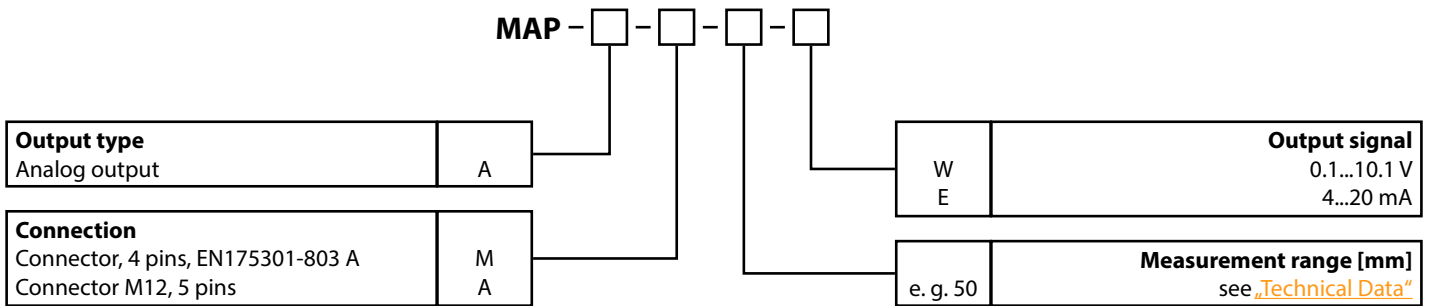
**Cable with mating connector M12, female, 5 pins, IP67**

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



## 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

### 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