

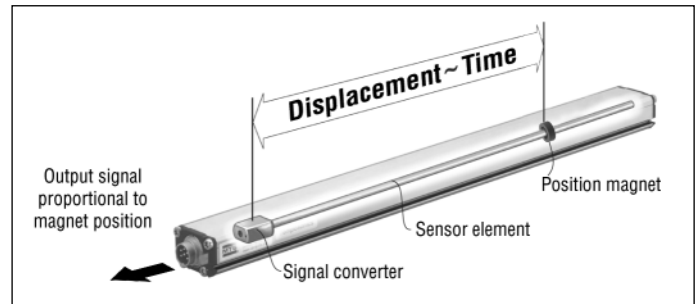
## E-Series Analog

**Temposonics EP2**  
Measuring range 100 - 1500 mm



**A tough low profile-style position sensor**

- Linear, Absolute Measurement
- Contactless Sensing with Highest Durability
- Linearity better 0,03 %
- Repeatability 0,005 %
- Direct Position Output: Analog 0-10 V
- Measuring range 100 - 1500 mm



### Magnetostriction

The absolute **Temposonics®** linear position sensors are based on the MTS developed magnetostrictive measurement principle. That combines various magneto-mechanical effects and uses the physical height precise speed-measurement of an ultrasonic wave (torsion pulse in its sensor element) for position detecting. Sensor integrated signal processing transforms the measurements directly into market standard outputs. The contactless principle - an external movable magnet marks the position - eliminates the wear, noise and erroneous signal problems and guarantees the best durability without any recalibration.

### Form factor

**Temposonics®** are extremely robust sensors, ideal for continuous operation under harshest industrial conditions. The sensor is completely modular in mechanics and electronics design.

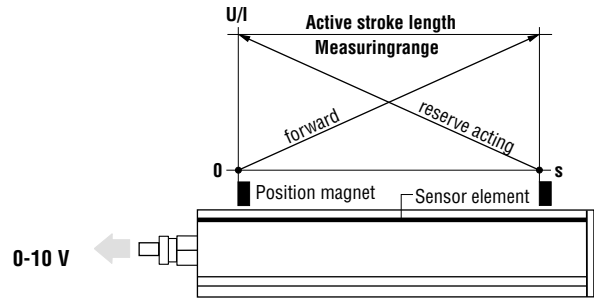
- A profile **sensor housing** protects the sensor element in which gives rise to the measurement signal.
- The **sensor head**, a solid diecast aluminum housing, accommodates the complete modular electronic interface with active signal conditioning. Double encapsulation ensures high operating safety and optimum EMC protection.
- The external **position transmitter** is a permanent magnet. It is fitted at the mobile machine part, taken over the sensing

# Temposonics-EP2

## Analog

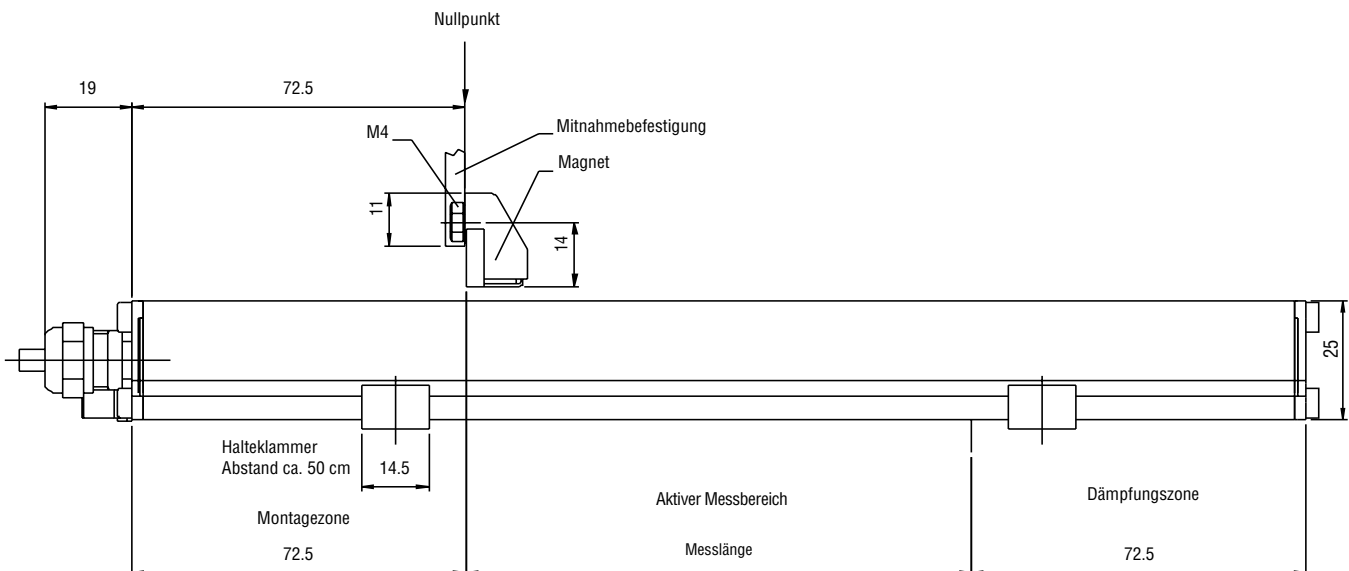
### Temposonics-EP A stable profile version Analog Output

Temposonics-EP are provided with an integrated analog interface and can be connected to a control system or indicator directly without an interface. The microelectronics in the sensor head generates continuous, strictly displacement proportional voltage and current outputs whose upscale or downscale output action can be selected when ordering. The output variables are factory-set. Recalibration is not necessary.



### Technical Data

Input	
Measured variable	Displacement
Measuring range	50 - 1500 mm
Output	
Analog	0 - 10 VDC or 10-0 VDC, Controller input resistance RL: > 5 kOhm
Accuracy	
Resolution	Infinite
Linearity, uncorrected	< ± 0,03 % F.S. (Minimum ± 90 µm)
Repeatability	< ± 0,005 % F.S.
Update frequency	> 1,5 kHz
Ripple	< 0,02 % F.S.
Operating condition	
Mounting position	Any
Magnet speed	Any
Operating temperature	40° C ... +75° C
Dew point, humidity	90 % rel. humidity, no condensation
Ingress protection	IP67
Shock rating	50 g (Single hit) / IEC-Standard 68-2-27
Vibration test	5 g / 10 - 2000 Hz / IEC-Standard 68-2-6
EMV-Test	Electromagnetic emission EN 50081-1 Electromagnetic immunity EN 50082-2 EN 61000-4-2/3/4/6, Criteria A / <b>CE-geprüft</b>
Form factor / Material	
Sensor	Aluminum
Position magnet	Block magnet
Installation	
Mounting type	Adjustable mounting clamps
Electrical connection	
Connection type	Cable gland
Input voltage	24 VDC (+20 % / -15 %)
Current consumption	50 - 140 mA, stroke length dependent
Ripple	< 1 % S-S
Electric strength	500 V (0 V ground to machine ground)
Polarity protection	up to -30 VDC
Overtvoltage protection	up to 36 VDC



### Mounting

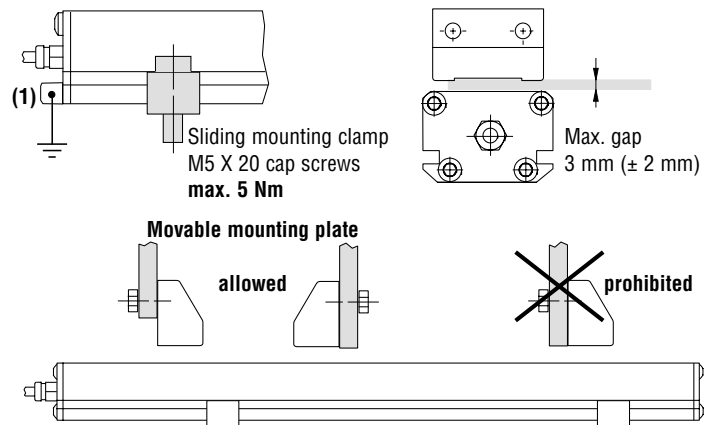
**Sensor** is fixed on a straight surface of the machine with the movable mounting clamp. We recommend cap crews M5 X 20 (DIN 6912) for the attachment with a torque of max. **5 Nm** to be tightened.

### ATTENTION!

Due to the anodized profile, the sensor is isolated from the machine ground. It is necessary that you apply ground to the housing via the flat pin terminal **(1)**.

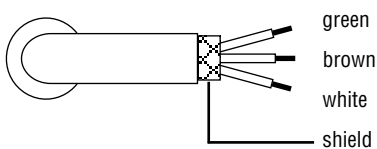
### Position transmitter

Block magnet **(2)** can be fixed with the standard material and screws as shown right.



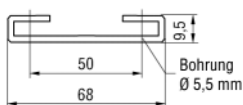
### Connections

PVC cable, Ø 5 mm



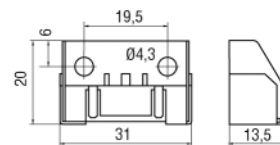
Wire color	Signal
green	0 - 10 V
brown	+ 24 VDC (-15% / +20%)
white	DC Ground (0V)
shield	Connected

### Accessories (Order separately)



### Mounting clamp (Stainless steel) Part No. 400 802

Mounting recommending:  
2 pcs. up 1000 mm stroke  
3 pcs. for 1000 mm strokes



### Position magnet Block magnet L Part No. 252 887

Bracket: CuSn6 Zinc coated  
Magnet: Hard ferrite  
Weigth: ca. 20g  
Operating temperature: -40 ... +75°C

### Ordering informations

Sensor with Analog Output 0 - 10 V, 5 m cable gland  
Position sensor Temposonics EP2-xxxxM - A

Measuring range (mm)  
0100 / 0200 / 0300 / 0400 / 0500 / 0600 / 0700 / 0800 / 0900 / 1000 / 1250 / 1500

Accessories: see above

**EP2 Sensors via Internet**  
**[www.temposonics-shop.de](http://www.temposonics-shop.de)**

# Temposonics-EP2

Analog

[www.mtssensor.de](http://www.mtssensor.de)  
[www.temposonics-shop.de](http://www.temposonics-shop.de)  
Service Hotline: 01805 - mtssensor

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