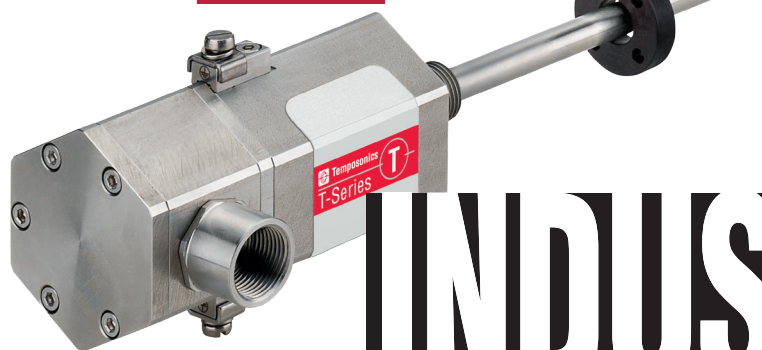


Series Selector Guide

Magnetostrictive Linear Position Sensors



INDUSTRIAL

MAGNETOSTRICTION AND ITS ADVANTAGES

Our absolute, linear position sensors are based on the proprietary **Temposonics® magnetostrictive technology** and capture position by measuring the time of flight of an acoustic wave. We measure time in picoseconds within a waveguide that we design, manufacture, and control – this makes our measurement more precise, reliable, and durable.

The speed of sound – **tempo** – is embedded in our name.



Absolute, non-contact measurement



No recalibration required



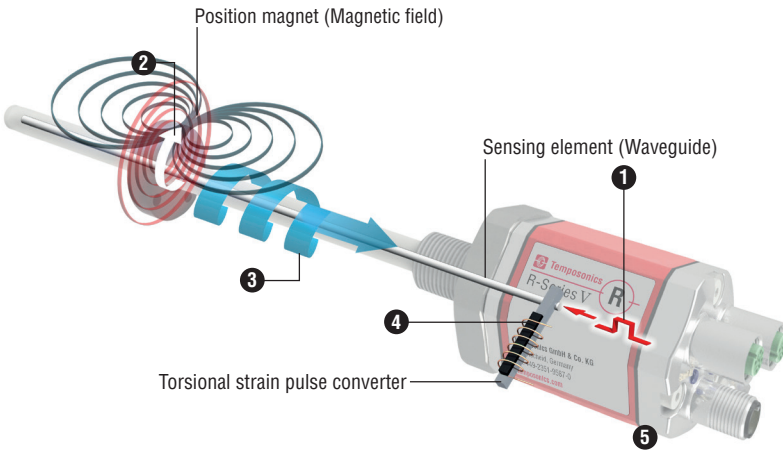
Highest sensor reliability



No mechanical wear



Robust and durable



Measurement Cycle

- 1 Current pulse generates magnetic field
- 2 Interaction with position magnet field generates torsional strain pulse
- 3 Torsional strain pulse propagates
- 4 Strain pulse detected by converter
- 5 Time-of-flight converted into position

IN PRACTICE ...

MINIMUM
RESOLUTION:
0.1 μm

SHOCK:
150 g/11 ms
VIBRATION:
30 g

TEMPERATURE
RESISTANCE
-40 °C
+120 °C

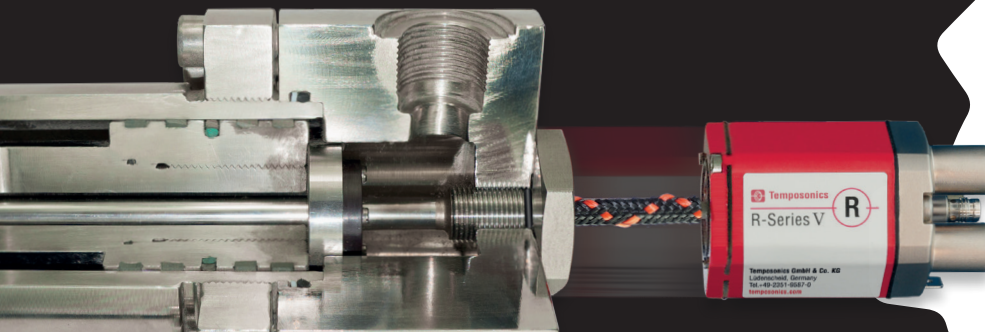
MULTIPOSITION
MEASUREMENTS UP TO
30 Magnets

STROKE LENGTHS
UP TO
20 Meters

MODULAR, ENVIRONMENTALLY FRIENDLY DESIGN

The modular sensor design of the R-Series V, G-Series V and GB-Series allows easy replacement of the sensing element and electronics without interrupting the hydraulic circuit. This not only prevents leaks from the cylinder port, but also significantly reduces maintenance costs and downtime.

Temposonics® technology is used in cylinders in almost all industries – from steel and wood to energy production.



INDUSTRY DIVERSITY WITH A CLEAR FOCUS

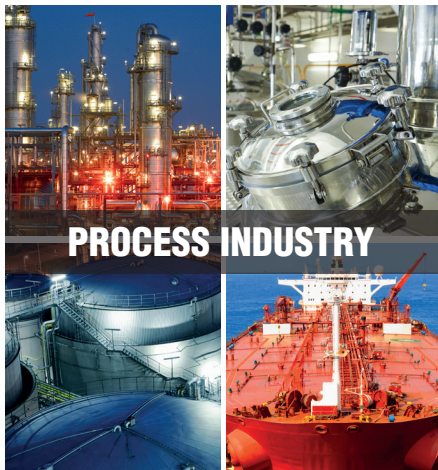


MOBILE HYDRAULICS

The magnetostrictive position sensors of the **Temposonics® MH- and C-Series** enable highly precise measurements and thus controlled, fast, and smooth movements in mobile working machines, vehicles for logistics and transportation, as well as in the automotive sector.

Key benefits:

- ✓ **Versatile designs:** Tailored to a wide range of application requirements.
- ✓ **Flexible installation:** Can be directly integrated into the hydraulic cylinder or mounted externally.
- ✓ **Large measuring range:** From 50 mm up to 10.5 m.
- ✓ **Extremely robust:** Resistant to shock and vibration for maximum safety and comfort for the operator, as well as high machine availability.



PROCESS INDUSTRY

The magnetostrictive level transmitters of the **Level Plus® LP- and LL-Series** are designed for automatic level measurement in above-ground storage tanks and process vessels – ideal for the oil, gas, chemical and pharmaceutical industries.

Key benefits:

- ✓ **5-in-1 measurement:** A single sensor captures level, interface, temperature, volume, and high-level alarm, space-saving and efficient.
- ✓ **Versatile designs:** Tailored to diverse application requirements.



– TRUST THE EXPERTS –

Temposonics – Pioneer and innovator in magnetostrictive sensing technology

For more than 50 years, Temposonics has been setting standards in performance and reliability. With decades of expertise in this field, the broadest portfolio of sensor solutions, and a consistent focus on our core technology, we deliver unmatched application know-how and first-class service. We operate production facilities in Lüdenscheid and Dortmund (Germany) and Cary, NC (USA), along with direct sales offices and authorized distributors worldwide.



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