

Series Selector Guide

Magnetostrictive Linear Position Sensors

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MOBILE HYDRAULIC

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.

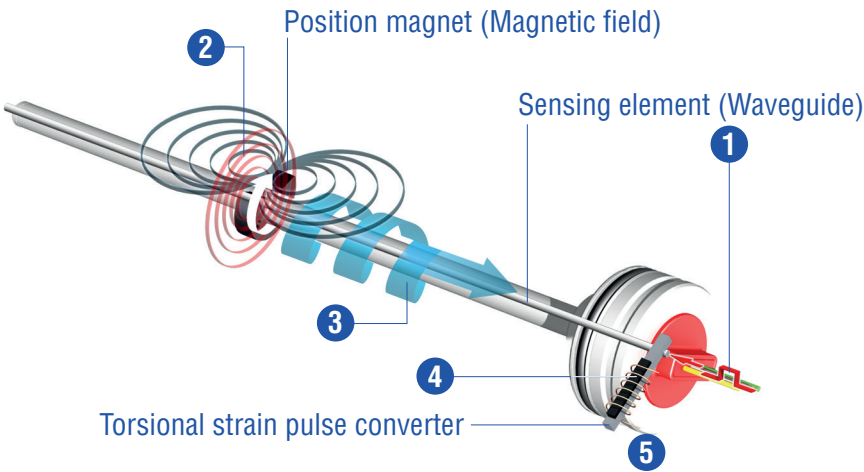
 **Absolute, non-contact measurement**

 **No mechanical wear**

 **No recalibration required**

 **Robust and durable**

 **Highest sensor reliability**



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 distance

IN PRACTICE ...



STROKE LENGTHS
UP TO
10.5 Meters



SHOCK:
100g
VIBRATION:
25g



TEMPERATURE
RESISTANCE
-40 °C
+105 °C

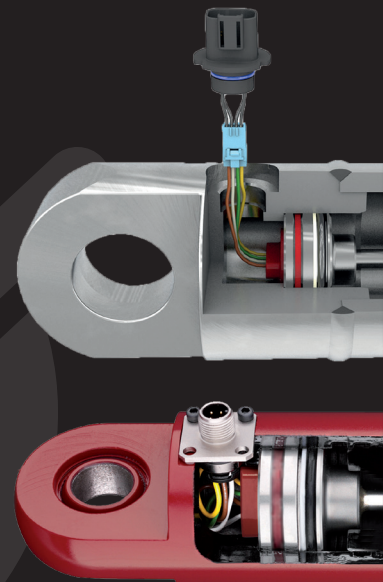


SIL2
MI-SERIES SAFETY SENSOR
Capable

EASY SERVICEABILITY & CONNECTOR ASSEMBLY

Our MH- and C-Series sensor solutions are specifically engineered to master the challenges of mobile working machinery and vehicles. Designed to enhance motion reliability, productivity, operator comfort, and safety, they ensure optimal performance even in the toughest environments.

Featuring quick click-connection systems (M12 & DT), flexible integration options (embedded or external), and sensor designs that enable fast electronic replacement and maintenance (e.g., FLEX & XTERNAL MOUNT), our solutions help keep your machines operating at their best.



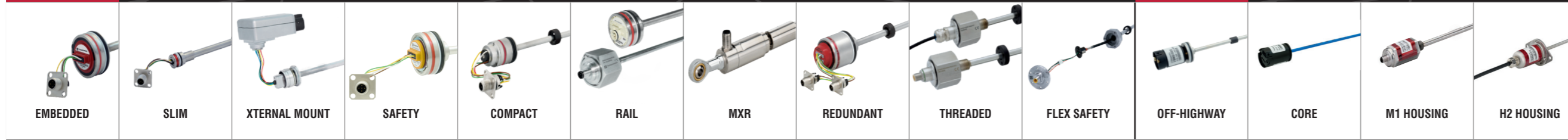


MH-Series



C-Series

SERIES QUICK GUIDE



FEATURES														
Velocity measurement	•		•	•	•				•	•				
Position measurement	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M12 Connector (IP69K)	•	•			•	•	•	•	•	•	•	•	•	•
DT Connector (IP67K&IP69K)	•	•	•	•				•						
Embedded installation	•	•		•	•	•		•				•		
Threaded version		•							•				•	
Replaceable electronics			•							•				
External mounting			•											
Ø Pressure pipe	7 mm/10 mm	10 mm	5 mm/7 mm	10 mm	7 mm	7 mm/10 mm		10 mm	7 mm/10 mm	12,7 mm	5 mm	4 mm	8 mm	4,8 mm
SIL2 capable				•						•				
Redundancy								•						
5 VDC Operating voltage								•				•	•	•
12 VDC Operating voltage	•	•	•	•	•	•	•	•	•	•	•	•	•	•
24 VDC Operating voltage	•	•	•	•	•	•	•	•	•	•	•	•	•	•
STROKE LENGTH														
Specific*														
100...600 mm		•												
50...2500 mm	•		•	•	•	•	•	•	•	•	•	•	•	•
50...5000 mm	•			•										
250...10500 mm										•				
OUTPUT														
Analog	•	•	•	•	•	•	•	•	•	•	•	•	•	•
CANbus	•	•	•	•	•	•	•	•	•	•	•	•	•	•

* The following stroke lengths are available: 72, 109, 128, 148, 162, 186, 194, 217, 250, 275 mm



SAVE YOUR TIME FOR THE THINGS YOU LOVE! — TRUST THE EXPERTS —

MARKETS



CONSTRUCTION



MATERIAL HANDLING



MARINE



AUTOMOTIVE



AGRICULTURE



MOTORCYCLES



FORESTRY



MUNICIPAL VEHICLES



TRANSPORTATION

APPLICATIONS

- Automated return to tool position
- Tilt control
- Boom extension
- Lift control
- Cabin suspension
- Steering automation
- Stabilizer

and more ...

- Autonomous vehicles
- Ride height control
- Grade/slope control
- Bucket positioning
- Blade control
- Propeller control
- Spoiler lifting control
- Damping control
- Closing devices
- Tank level

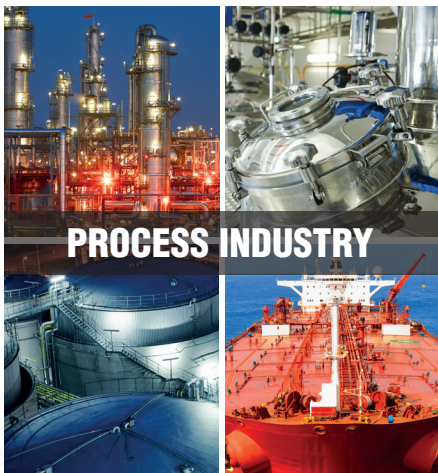
INDUSTRY DIVERSITY WITH A CLEAR FOCUS



Temposonics magnetostrictive position sensors for industrial applications enable precise measurements for controlled, dynamic movements, ensuring efficient and trouble-free automation. They guarantee maximum productivity and reliability across a wide range of applications such as rolling mills, injection molding machines, sawmills, paper cutting machines, and in the field of renewable energy.

Key benefits:

- ✓ **Versatile designs:** Developed to meet diverse application requirements.
- ✓ **Flexible installation:** Can be directly integrated into the hydraulic cylinder or mounted externally.
- ✓ **Large measuring range:** From 25 mm up to 20 m.
- ✓ **Future-Proof with Industry 4.0:** Additional operating data via TempoLink® and TempoGate® enable predictive maintenance and increased machine availability.



The magnetostrictive level transmitters of the **Level Plus® LP- and LL-Series** are designed for automatic level measurement in above-ground storage tanks and processvessels – 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.



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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