

## Use Case Spotlight

# Military & Defence

Magnetostrictive Linear Position Sensors for Reliable Motion Control



For mission-critical position sensing – where accuracy, reliability, and longevity are a must.

**– TRUST THE EXPERTS –**

# WHY POSITION MEASUREMENT?

Whether on land, sea, or in the air, accurate position feedback is essential for mission success, operational safety, and long-term system reliability. Temposonics® position sensors are engineered to meet the highest standards, delivering uncompromising accuracy and reliability over the years in extreme and safety-critical environmental conditions.

## WHY WE PERFORM WHERE OTHERS FAIL

### ■ MAGNETOSTRICTION: PROVEN & ROBUST TECHNOLOGY

- **Absolute, non-contact position sensing**
  - No recalibration required
  - No mechanical wear
  - Maintenance-free operation
- **Mission-critical precision**
  - Reliable positioning in real-time, even under dynamic conditions
  - Picosecond-accurate measurement enabled by a proprietary waveguide that we design, manufacture, and control

### ■ RUGGED & INNOVATIVE DESIGNS

- **Rugged**  
Resistant to shock, vibration, dust, humidity, temperature extremes, and corrosive environments
- **Long-term reliability**  
Proven performance over many years of continuous operation
- **Wide range of form factors and connector assembly, interfaces and certifications** for seamless integration in your systems (in-cylinder or external mounted), easy serviceability and maximum flexibility

### ■ CUSTOMIZED SOLUTIONS

- **Customer-specific** design and development tailored to application requirements

## IN PRACTICE...

MINIMUM  
RESOLUTION  
**0.1  $\mu\text{m}$**

SHOCK  
**150 g/11 ms**  
VIBRATION  
**30 g**

TEMPERATURE  
RESISTANCE  
**-40 °C**  
**+120 °C**

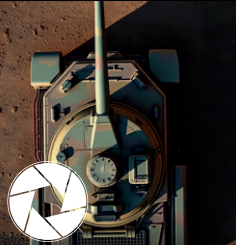
MULTIPOSITION  
MEASUREMENTS  
UP TO  
**30 Magnets**

STROKE  
LENGTHS  
UP TO  
**50 Meters**

**SIL2**  
MH-SERIES SAFETY SENSOR



# WE UNDERSTAND YOUR APPLICATION ...



Positioning of optical & surveillance cameras



Steering automation & suspension systems



Weapon positioning & alignment



Stabilizer, lift control, boom extension



Radar & antenna positioning



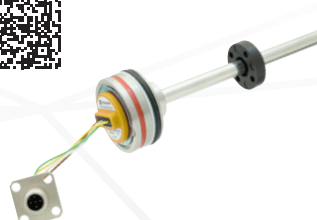
Tank level measurement

## AND DELIVER THE OPTIMAL SENSOR SOLUTION WITH EXPERT SUPPORT:



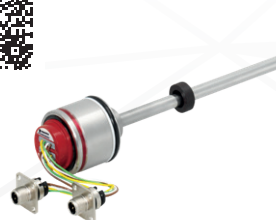
### R-Series V FLEXIBLE

- High performance sensor
- Flexible rod with 100 mm bend radius
- Stroke length: 150...20.000 mm



### MH-Series SAFETY

- Suitable for Safety Integrity Level 2 (SIL-2) applications & category 2 PLD
- IEC 61508, ISO 13849-1/13849-2
- Stroke length: 50...5000 mm



### MH-Series REDUNDANT

- With two redundant sensor elements in a single pressure resistant rod
- Stroke length: 50...2500 mm



### MH-Series XTERNAL MOUNT

- Replaceable electronic module automatically pairs with the existing sensing element inside the cylinder
- Stroke length: 50...2500 mm

# A TRUSTED PARTNER



**Decades of leadership in magnetostrictive position sensing**



**Deep, hands-on application expertise across various industries**



**Highest quality through in-house R&D and production**



**Commitment to quality, consistency, and compliance**



*Thinking globally. Acting locally.*

**As part of the Amphenol Group, we operate state-of-the-art production facilities in Germany (Lüdenscheid & Dortmund) and the USA (Cary, NC), supported by a global network of direct sales offices and authorized distributors.**



**temposonics.com**

## **Document Part Number:**

552249 Revision A (EN) 03/2026

### **UNITED STATES**

**Temposonics, LLC**

3001 Sheldon Drive,

Cary, NC, 27513

Phone: +1 919 677-0100

E-Mail: [info.us@temposonics.com](mailto:info.us@temposonics.com)

### **GERMANY**

**Temposonics GmbH & Co. KG**

Auf dem Schüffel 9

58513 Lüdenscheid

Phone: +49 2351 9587-0

E-Mail: [info.de@temposonics.com](mailto:info.de@temposonics.com)